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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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PUBLIC INFORMATION MEETING

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YUCCA MOUNTAIN REVIEW PLAN

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WEDNESDAY

MAY 22, 2002

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LAS VEGAS, NEVADA

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The Public Meeting was called to order at the Conference Room of the Clark County Building Department, 4701 West Russell Road, Las Vegas, Nevada, at 2:03 p.m., by F.X. "Chip" Cameron, Facilitator, presiding.

I-N-D-E-X

P-R-O-C-E-E-D-I-N-G-S

(2:03 p.m.)

MR. CAMERON: All right. If we could get started. Good afternoon. My name is Chip Cameron, and I will be the Facilitator for today's public meeting, and I would like to welcome you to the NRC's public meeting on the draft Yucca Mountain Review Plan.

And it is my pleasure to serve here this afternoon as your Facilitator for today's meeting, and in that role I am going to help you to have a productive meeting today.

And I am going to go over three items before we get into the substantive discussion today. And the first thing that I would like to talk about are the objectives for the meeting.

And secondly to tell you what the format and the ground rules are going to be for the meeting, and last I just wanted to go over the agenda for you so that you know what to expect this afternoon.

In terms of objectives, the NRC wants to make sure that you have a clear idea of what the NRC's responsibilities are for licensing any potential repository at Yucca Mountain, and specifically, to talk about the draft Yucca Mountain Review Plan, and

how that fits into the NRC's licensing responsibilities. I want to make sure that you have that information, and that we clearly express and communicate that to you.

A second objective, and the most important one, is to hear your comments and concerns about the draft Yucca Mountain Review Plan, as well as our licensing responsibilities in general.

The ultimate goal of the NRC is to take the comments that we hear today, and to use those comments to help us to finalize this Yucca Mountain Review Plan.

We are asking people for written comments also on the Yucca Mountain Review Plan, and we wanted to be here this afternoon to talk to you in person about the Yucca Mountain Review Plan, and you may hear information today from the NRC staff, or from other people in the audience that helps to prompt you to submit a written comment, or helps you to prepare a written comment.

But I wanted to emphasize that anything that you say today will carry the same weight as any other comment that you send in to us in writing. And I think the staff is going to go into some of the more -- into more of the details on how you can give us

those written comments.

In terms of format and ground rules, we will have a series of NRC presentations that we are going to try to keep brief for you, and then we are going to go after each of those presentations to talk with you, and to answer your questions, and to hear your comments about that particular presentation, and we are trying to balance the need to give you information about the NRC and this review plan with being able to talk to you about it.

And we don't want to just spend our time talking at you. We want to try to talk with you. So we will try to keep that balance. I don't know that we will be able to, but I would just ask the NRC staff to try to be as concise as possible with their presentation.

In terms of ground rules, they are fairly simple. If you have a question or comment after each presentation, just signal me, and I will either bring you this talking stick, or there are some mikes in the aisles, and please feel free to use those.

But if you could then give us your name, and affiliation, if appropriate. We are taking a transcript tonight, and our stenographer, Paul, is back there, and it doesn't look like he is doing much,

but he is getting it all down because he is a master at this.

But we will have a transcript, and it will be available on the NRC website, and we will be able to send you a hard copy of that transcript if you so desire.

But that will be our record of today's proceeding. The second ground rule is, please, only one person at a time speaking. Not only so we can get a clean transcript and so that Paul will recognize who is talking, but more importantly so that we can give our full attention to whomever has the floor at the time.

And I want to make sure that we give everybody a chance to talk tonight, and in keeping with that, I would just ask you to try to be as brief and concise as possible in your comments.

And I recognize that this is a complicated issue, and it is a controversial issue, and it is tough to keep things really brief sometimes. But if you could try to do that, then we will at least have a possibility of getting to everybody who wants to talk.

And in terms of agenda, I think you all have the blue agenda in your packet, and I am going to

get to that in a minute. But first of all, I wanted to just mention that there may be a comment that comes up, or a question that you have, and it does not fit squarely under the agenda item that we are talking about.

We will defer discussion of that issue until we get to that part of the program. I will put it up here in the parking lot so that we don't forget it, and come back and discuss it.

And another point is that we know that there are a lot of concerns and there is a lot of issues in regard to Yucca Mountain, and the NRC is always interested in hearing from people on those issues, and in providing information to you on those if we can.

But our main focus tonight is going to be -- or today, is going to be on the review plan. So if we can get to that information and hear your comments as to that.

If you look at your agenda, we are going to start off with a broad overview presentation on the NRC's role for judging the safety of a proposed repository. We are going to go to Janet Schlueter from the NRC staff.

Janet is the new Chief of the High-Level

Waste Branch at the NRC and is in our Office of Nuclear Materials Safety and Safeguards. And she is going to give us that overview presentation.

Next, we are going to get a little bit more specific and we are going to get an overview of the draft Yucca Mountain Review Plan, and how it is organized, and what the objective of that plan is. And we have the senior project manager, Jeff Ciocco right. He is on Janet's staff, and he is going to give us that presentation. By way of background, he is a geologist, and an environmental engineer, and he is shepherding this project through at the Nuclear Regulatory Commission.

And again after each of these, we will go out for public questions and comment. The next presentation is a description of safety in operations, and we have Pat Mackin right here from the Commission's Center for Nuclear Waste Regulatory Analyses, and that is a very special group.

They are our prime research contractor. They were created solely to give advice basically to the NRC on this project so there would no be any hint of any conflict of interest, in terms of their working for the license applicant here.

But Pat is a systems engineer and he is

going to talk about that part of the review plan that deals with how the NRC would ensure safety in terms of construction of a repository, and bringing the fuel on-site, and let me just make a big caveat here.

We don't know that there will be any application for this repository, and if there is, it has to meet the NRC regulations. So there is no guarantee that that will happen. That will have to be done after an NRC evaluation.

So I don't want to give the impression that because we are talking about what the NRC will be doing to ensure safety during construction and bringing fuel on, that that is any predisposition or whatever about the licensing of a repository.

The next presentation is going to be on long term safety, and this is basically -- this is another part of this review plan, and basically this is how we will judge if the NRC regulations are being met after repository closure, and we have Tim McCartin right here with us.

Tim is a physicist by training, but I think not only for the NRC, but in terms of what is called performance assessment -- and he will be talking more about that, but in terms of performance assessment on geological repositories, he is not only

the NRC's long time expert, but I think probably one of the world's expects in performance assessment.

We are then going to go back to Jeff Ciocco to talk about how is security factored in. In other words, sabotage of materials of the repository, and diversion of those materials, and how does the NRC handle those issues. Again, that is another part of this Yucca Mountain Review Plan.

And finally we will go back to Pat Mackin from the Center to talk about monitoring and performance confirmation, and how will the NRC keep checking to see if things are going right at the repository.

So as you can see, that is what I call a lot of moving parts, but if we will try to not keep you too much longer past the time for the meeting to adjourn here.

But I would like to thank all of you on behalf of the NRC for taking the time to be with us this afternoon. The NRC has some important decisions that it has to make, not only on repository generally, but also just in terms of finalizing this review plan, and we thank you for your assistance on that.

And this is one meeting, and we are having a series of meetings here this week. And just one

point on the time spectrum. Please get to know the NRC staff.

They are very willing to be contacted by e-mail or phone, and so maintain some continuity with them. If you have questions or if you have concerns, please contact them. And just a couple of administrative items.

There is a sign-up sheet, and if you haven't signed up, please do that. It is right over here, and there is also something called -- or what I call an evaluation form, and this helps us to improve public meetings, in terms of notice, which we need to do a better job on all the time, and we always remember that.

But this helps us to improve on that, and so please one out if you get an opportunity to do that. And Janet, are you ready to start us off?

MS. SCHLUETER: Sure.

MR. HERESZ: Could I ask a question?

MR. CAMERON: Yes, sir. What is your name, please?

MR. HERESZ: My name is Andy Heresz, and I am a resident of the State of Nevada, and I live in Clark County, the City of Las Vegas, and a taxpayer, and I am a registered voter, and I am a very angry

U.S. citizen about Yucca Mountain.

And I am wondering, and maybe I missed it, but is there a representative here from the Nuclear Waste Technical Review Board?

MR. CAMERON: The short answer is that I do not think there is a representative from the Nuclear Waste Technical Review Board.

MR. HERESZ: I think you are lacking by not having a representative from that part of the process.

MR. CAMERON: Okay. So we can put this issue to rest, we will go to Judy, and then we will go to Dennis. Judy.

MS. TREICHEL: Judy Treichel, and I think that one of the things that you should be aware of is that there was one notice that went out to the Nuclear Waste Technical Review Board on this meeting and what was going on.

There was absolutely no notice to any of the public interest groups, although 81 people are on the distribution list, and 19 from the Department of Energy's project office, and none of the public interest groups who have been with this thing from the beginning.

So I don't know why I would have to fill

out one of those forms in order to get the document that came out or a notification from the NRC, and that this is more than an oversight.

MR. CAMERON: Well, that point is well taken, but I do want to say if you are saying by using the word oversight and that the indication is that it was an intentional, you know, Judy, that is not true. Dennis.

MR. BECHTEL: Dennis Bechtel, a citizen. I guess I wanted to submit this for the record, I guess, and it doesn't really fit into your format, I guess. So could I do that?

MR. CAMERON: Yes.

MR. BECHTEL: The other thing is that if you have process questions, how do you want to go with that?

MR. CAMERON: Well, we are going to go to Janet now, and she is going to talk about overview issues, and you may see an opportunity -- your questions may relate to that. So we will see if they do.

And if they come up later on, we will answer them then, okay?

MR. BECHTEL: All right.

MR. CAMERON: Okay. Janet.

MS. SCHLUETER: Okay. Thanks, Chip. As Chip mentioned, my name is Janet Schlueter, and I am the Branch Chief for the High Level Waste Branch of the NRC.

We are the focal point for the High Level Waste Program at the NRC. I will try to be brief. We have some presenters who will be talking about the substantive items.

But we thought it would be helpful if we provided you with some context with regard to the NRC's overall goals in the current process and potentially with respect to Yucca Mountain.

Who is the NRC? We are an independent agency, and we are independent of the present administration and the other branches of the Federal Government, the judicial and legislative branches.

We are not part of the Energy Department. Our role is to ensure that as an independent regulator we make an independent safety decision with respect to any potential repository.

We are also an experienced regulator, and we have about 25 years of hearing and licensing a wide variety of facilities, that range from medical, to industrial, commercial fuel facilities, as well as commercial nuclear power reactors.

Our sole mission is the protection of public health and safety and the environment, as well as for the protection of personnel working there.

The NRC has also been charged by the Congress with regulating any potential repository that the Energy Department might apply for.

What exactly is our role at Yucca Mountain? Well, by law, we have been required to set rules that would apply to Yucca Mountain that would protect public and worker safety, and the environment, and we have done that.

And we have also set rules that are consistent with those that have been issued by the Environmental Protection Agency. We also continue to conduct pre-licensing interaction with the Energy Department in order to exchange information about the site, and will conduct and make an independent decision with regard to whether or not there should be construction of the repository and then eventual operation of the repository.

As an independent regulator, just like the name of our facility, we are responsible for ensuring that the applicant or the licensee obeys regulations, and that is done through licensing, inspection, and an enforcement program.

How will we carry out our role? Well, as an independent safety regulator, we will review all the information that we receive objectively, and thoroughly assess safety expectations at the site.

We will also make a decision in an open and transparent way, and maintain a public process in doing so. As part of this public licensing process and our internal safety evaluations, the Yucca Mountain Review Plan represents a significant milestone, and that's why we have here today to solicit your comments on the document.

How will we carry out our role? We will make our licensing decisions one step at a time based on the information that we have before us at that time.

That includes the initial decision with regard to construction, which would only occur if the Energy Department submits a license application to us, and a subsequent decision at the appropriate time with regard to whether a license should be granted and then to operate, and then also for the potential closure of the repository.

Our job is to decide whether or not the Energy Department should be allowed to construct a potential repository, and if the Energy Department

does submit a license to us, we are required by law to conduct our licensing review within 3 years of having received the application.

Congress also requires that the NRC provide a full and fair public hearing as part of that process, but before any of this could occur there are several steps which need to be taken, some of which have already occurred.

And as you can see by this diagram and the preceding one, there was the environmental impact statement, and the recommendation by the Energy Department, the recommendation by the President, who made his recommendations to the Congress, and the Congress decision that is now occurring on time.

Congress will announce within 90 consecutive days in session whether or not the site recommendation should take effect. At that point, it is up to the Energy Department to decide when and if to submit a license application to us.

And if that were to occur, the next thing would be that the NRC would make a decision as to whether or not the license application is what we refer to as docketable.

Which is whether there is enough information in the application for the NRC to begin

its review. That review has to be made within 90 days of having the applicant fill out its application.

If we decide that the license application is docketable, we would then begin our safety review, and we would complete the safety review within the 3 years of having received the license application.

Besides the licensing process as I mentioned, there is a hearing aspect, and the burden of proof is of course upon the applicant, and in this case, the Energy Department, and there are three possible outcomes to the licensing process, consistent with the licensing process that we use in other programs of the NRC.

First, we could deny the application, and in that case the applicant would not have provided enough information for the NRC to make a safety determination.

In other words, that the applicant has not demonstrated that the NRC safety requirements could be met, and we would deny it.

We could grant a license with certain conditions, where the applicant would need to provide additional information before the license could be issued, or we could grant the license as applied for.

How do we decide whether to accept the

Energy Department's application We have to make decisions with regard to whether or not it does contain all the required information, and whether the safety claims that the Energy Department has made is backed by sufficient documentation.

Also, there are document access requirements, and that the information be easily accessed by the public in an electronic form and the information is timely, and we have to determine whether or not those requirements have been met.

If yes, then our detailed technical review of the license application begins, and the three year clock starts.

How would we address safety issues? We would rely on our independent experts, those at the NRC headquarters, which is my branch, as well as both the independent engineers and scientists that we have at the Center for Nuclear Waste Regulatory Analysis in San Antonio, Texas, which Chip mentioned previously.

We do have two representatives here from the Center. We have Pat Mackin, who has been introduced, and also Mike Smith. Mike is at the Center in Texas as well.

We would also require more information be submitted from the Energy Department as needed if we

identify that there is information gaps in what they have provided to us.

We also do our own testing at the Center in Texas, and we would document our conclusions in a transparent manner. On what basis would we adopt the Energy Department's final environmental impact statement?

Well, the law requires that the NRC must adopt it unless one of two conditions exist. First, the action to be taken as a result of the licensing process differs from that described in the final environmental impact statement, and that difference may significantly affect the environment.

Or in the other case, there may be significant and substantial new information or considerations that make the final environmental impact statement inadequate that the NRC would not docket it.

I would like to assure you that if the Energy Department submits a license application to us, we will need to have a program in place, and that we are ready and prepared to judge the safety of any potential repository.

We do have protective standards and regulations in place, and we do continue to hold our

public interactions with the Energy Department, and to request information that is important to understanding the potential operation of the repository.

And in addition we have drafted our draft Yucca Mountain Review Plan, which we are here today to discuss, which the staff reviews to conduct that safety review of the license application.

And a little more detail on our regulations. As part of the process of being ready to potentially judge the safety of a repository, we did issue our proposed regulations that would apply to Yucca Mount in February of 1999.

And we received public comment at that time to extend the public comment period, and we did so for a period of about two months. And the final Environmental Protection Standards were issued last June, and we subsequently issued our conforming standards last November.

In order to ensure that the citizens of the State had an opportunity to provide their comments to the NRC and we heard them, we have held six public meetings during that time period on our proposed regulations.

And overall we have received more than 1,000 individual comments, including many that we

heard at meetings such as the one we are having here today.

And that is the importance, as Chip mentioned, of the transcript that will be provided, and that will provide us a written record of those comments so that we can go back and review those, just as the ones that we have received and reviewed by letter.

After reflecting on those comments that we have received, we did make major changes to our rules, and I think you will find that the changes were responsive to the major concerns that we heard from citizens.

We did wait and issue our final paper after the Environmental Protection Agency had issued theirs, and we also adopted the Environmental Protection Agency's limits for individual protection, as well as their separate ground water limits.

We also retained our formal hearing process and that we currently use for licensing of other facilities and other programs at the NRC. For the time being the NRC has no role, or a very narrow row, in the whole site decision process.

It is not appropriate for the NRC to take a position on that, or whether or not a repository

should actually be located at Yucca Mountain.

As an independent regulator, our view and our licensing decision would be based and shaped much later in the process, and based on information that the Energy Department would submit to us.

As provided for under the law, we would continue to have public interaction with the Energy Department to identify additional information with which to better understand the license application.

As a result of that, these interactions with the Energy Department have identified information gaps, which then translate into or relate back to, and links back to nine key technical issues which we use to categorize the technical areas which we have used to guide our review of the Energy Department's site characterization efforts to date.

And we have a handout on the table, and which some of you may have already picked up, and these include such technical areas as would water move above and below a potential repository; how would the waste heat affect when and how water reaches the waste.

And how long will these containers last, and what wold happened to the waste when the containers are breached. These key technical issues are considered important for understanding if a

repository would be safe, and because they are important, we have used them to be the framework for not only our rules, but also the draft Yucca Mountain Review Plan that we are here to talk about today.

How will we judge that we have enough information about the key technical issues from the Energy Department? Well, we have developed acceptance criteria which are based on issues significant to safety, and these criteria and their technical bases, have been documented in a series of publicly available reports.

The Yucca Mountain Review Plan consolidates those criteria into one document, and that is what we are here today to discuss. It is an important document to the program.

How will the NRC use the Yucca Mountain Review Plan? The Yucca Mountain Review Plan is a licensing guide that the staff will use as our basis for the NRC staff review of the potential license application.

It is our guidance to conduct an internal safety review of the license application, and it will also describe, and I hope you will look at the criteria that is contained in the document, to ensure that it is clear in describing how the NRC reviews

this, and in making a decision.

We welcome your comments on the plan, and we did issue a Federal Register Notice in late March, March 29th, and we have also posted a copy of the plan on our website, and we have hard copies here as well.

And as Chip mentioned, we will be having our last Yucca Mountain Review Plan public meeting here tomorrow at 6:30.

The current comment period runs through June 27th, and we did receive a comment last night for an extension of that time period, which we will consider.

And we again appreciate your input and suggestions on the plan, and hope that you will find time to file your comments either tonight or at a subsequent time.

The NRC will be ready if Congress allows the current designation of Yucca Mountain to take effect, and as I mentioned we do have our standards and regulations in place, and the review plan will address the public comments and concerns.

We also will conduct a full and fair hearing as part of this process, and as the High-Level Waste Branch Chief, it is my job to ensure that the staff and the individuals at the Center fulfill our

regulatory obligations to protect public health and safety and the environment as we potentially go through a license process that may be applicable to Yucca Mountain.

And I am here today to hear your concerns, and I assure you that we are here to consider your comments with the utmost sincerity, and that we consider them significant.

And before we go move on to the next presentation, I would be happy to answer any questions that you might have.

MR. CAMERON: Okay. Thank you, Janet. This is an overview presentation, and if you do have comments that relate to the NRC's overall responsibilities, this would be the most appropriate time to give us comments. We will first go over to -- is it Andy?

MR. HERESZ: Correct.

MR. CAMERON: Andy, and then we will go to Dennis. Andy.

MR. HERESZ: I am curious. How many licenses has the NRC issued for high level nuclear gunshots like you are preparing to do here for Yucca Mountain? And if so, could you give us a status update, and the locations where they are at?

MR. CAMERON: Janet.

MS. SCHLUETER: (Off microphone) Well, currently there are no facilities which are licensed to store spent nuclear fuel in a geologic (inaudible), but we have issued several licenses to utilities which store spent (inaudible) --

MR. CAMERON: Okay. And --

MR. HERESZ: Well, you really are learning how to fly here is the general issue that I see.

MR. CAMERON: Andy, we are not the -- we always need to get it on the transcript, and let get the other people and if you have another question, we can come back to you, okay? But I think people heard what you said. Dennis. Please tell us who you are.

MR. BECHTEL: (Off microphone) Dennis Bechtel. I have a couple of questions about -- well, during the licensing period (inaudible), and the second one is that (inaudible) -- rejecting this specific role, and that is as a surrogate for the (inaudible) --

MR. CAMERON: Okay. Janet, were you able to understand Dennis' question?

MS. SCHLUETER: I was having a little trouble hearing him.

STAFF: If you use the floor mikes, you can

hear a lot better than you can if you use the hand mikes.

MR. CAMERON: I think Janet has the question, and we will keep working here and when you use this, just talk closer to it. But Janet, can you answer that?

MS. SCHLUETER: Yes, with regard to the licensing process and how we license other facilities, we would continue to have (inaudible) and the license application would be made publicly available, and that is one applicant would come to the Federal Government, and we would log that and make that information publicly available.

And you would have the ability to look at the application yourself. If there were a need to request additional information from the department, or to seek clarification on something in their package, we would typically review that by a publicly available letter, and there would be a forum of communication back to the Energy Department, and which would be publicly available.

And we would also require that the response would be made publicly available, and it is possible that we would continue to hold some public interaction to obtain or seek clarifying information

in the application.

And for some hearings, public hearings, and those hearings would (inaudible). With regard to license support and the Nuclear Advisory Review Panel, I believe that they had last met here last summer, and (inaudible).

I believe the Advisory Review Panel did (inaudible) in the Las Vegas area, and the last time that we spoke to individuals connected with that activity, I believe in the July or August time frame.

MR. CAMERON: And those meetings are also open to the public, besides having the broad spectrum of affected interests represented on the Advisory Review Panel; is that right?

MS. SCHLUETER: Yes.

MR. CAMERON: Okay. We are going to go to this gentlemen, and we will get to all of you. We are just going to work northern.

MR. WARNER: Yes. My name is Tom Warner, a citizen of Nevada, and a veteran. Two questions I would like to ask. In regards to DOE, would you consider DOE's track record in attending such places hampered in this process, and deeming them responsible for getting the whole license.

And, secondly, the GAO report which had

some question or recommendations in it, will DOE be required to address those issues with you in the licensing process? It seems that Congress is ignoring your report, but I was wondering will the NRC make DOE answer GAO's comments?

MS. SCHLUETER: Are there specific comments in the GAO report that you are referring to?

MR. WARNER: Specifically, that they are about six years away from coming up with an acceptable scientific approach to store this stuff, and it seems that they were marching off with this thing even functioning before it is even approved scientifically.

And Congress, who the GAO works for, doesn't seem -- they asked for a report and they didn't seem to do anything with it. I am wondering if the NRC is going to do anything with it.

But of more concern to me is DOE's track record in handling it. There are super fund sites of DOE all over this country.

MS. SCHLUETER: Right.

MR. WARNER: And this seems bigger than (inaudible).

MR. CAMERON: Okay.

MR. CAMERON: Janet, I think the question is how does -- how does the NRC -- and this would

apply to any licensee, how does the NRC look at the track record at other facilities, and secondly, how should the NRC somehow factor into some of the issues that are in the GAO report?

MS. SCHLUETER: Well, with regard to (inaudible) of the energy part, it is self-regulated, and we cannot have regulatory oversight responsibility on any of the sites they mention, or any of the labs.

This case is different. We have been required by Congress to be the regulator of a potential site, and so we have a role to do that as an independent regulator, and we will apply the same type of rigor to that licensing section and focus process as we do at our other licensed facilities.

We again have had no role to this point, but when it comes to Yucca Mountain, obviously we will be looking at the information that the Energy Department submits to us.

And in making that determination, as I mentioned, the draft Yucca Mountain Review Plan will be our key document, and it contains the criteria that will be used to make our decision.

So the DOE application on the Yucca Mountain repository is an independent action by the Department and by us, which might be looked at at face

value for --

MR. WARNER: So the history of the performance of the agency --

MR. CAMERON: We will have to get you to use the microphone, sir.

MR. WARNER: I guess my concern is that I have never heard of awarding anybody anything without going through the agency, the government, or whatever it is.

But yet what you are telling me is that DOE is starting this with a clean slate, as if they have had no problems in the handling of waste in the past.

But because you are going to be involved, that doesn't matter to you anymore what their track record is? I understand that you have not been involved in the past. You have not been involved in the past, but DOE has, and has been irresponsible before. But that doesn't seem to matter in your process.

AUDIENCE MEMBER: (Inaudible.)

MR. CAMERON: There are -- excuse me, but we need to get all of this on the transcript, and this is a legitimate issue that this gentleman raised.

And as you will be hearing later on from

the NRC staff, we look at qualifications, training of licensed applicants, and in some cases the NRC has looked at with reactors at least management qualifications.

And in terms of the past history and if that is going to be considered in the application, I believe that it all has to be within the four corners of the regulations, and there may be some room for people to bring up that type of past history.

And let me get a clarification here from Chet. Chet, do you have something to offer on that?

MR. POSLUSNY: Let me just suggest this. That your comment was very valid, and that would be an excellent comment under the review plan, and maybe that something that we should take into account.

MR. CAMERON: And we will so consider it. Janet, if you would comment on the GAO point to finish out this gentleman's question?

MS. SCHLUETER: Well, I think the issues that the GAO raised with regard to whether or not the Energy Department would be ready, whether it is a year from now, or three years from now, certainly would be part of our decision. We are not going to license something --

AUDIENCE MEMBER: We can't hear you.

MR. CAMERON: Janet, I think you are going to have to get closer to the mike.

MS. SCHLUETER: Sorry. What I was saying was that we certainly would not license the facility if the applicant had not submitted enough information to us to demonstrate that the safety requirements were going to be met, regardless of whether that license application came in 2 years from now, or 10 years from how.

MR. WARNER: So you do acknowledge --

MR. CAMERON: I am going to have to ask you again to -- I know that it is a natural tendency to just start talking, but we are taking a transcript, and also we have to make sure that other people get a chance to talk.

But if you want to make one final comment on the record, you may do so. Does that answer your question on the GAO?

MR. WARNER: Yes.

MR. CAMERON: Okay. Thank you. Let's get to Judy, and then we will go to Calvin, and then we will go over to the other side. Judy.

MS. TREICHEL: (Off microphone) Judy Treichel from the Nevada Nuclear Waste Task Force. I would like to tell you something very interesting,

because you talk about our independence, and that comes up at every meeting, and someone sent me a newspaper article (inaudible) very well, and it said that in this particular township trustees have been asked (inaudible) to endorse the highly controversial proposal by U.S. DOE and inaudible.

So even reporters who work in those areas have a very difficult time understanding the independence, and I am just throwing that in, too, to let you know that (inaudible).

And I think you are being really deceptive if you try to give the impression that the public plays any sort of role at all in licensing. The things that you listed are stuff that if they tried real hard, they could find (inaudible), but as far as licensing is concerned, unless it is going to be very, very different than what is going on in Skull Valley.

There is absolutely no ability to be approached for any role. They have up there what they call limited access appearances, and the judges made it extremely clear to anybody who showed up there that they were not going to consider anything that the audience had to say.

I was there in the audience when they made their decision, and the only people that possibly

could benefit from listening might be the attorneys or the staff of the NRC, which was a hammerheaded advocate for that, and I assume that would be the case for Yucca Mountain as well.

So the public was standing there talking into the wind.

MR. CAMERON: And when you say assumed that would be the case for Yucca Mountain, I am not sure about the hammerheaded advocate part of it, but I just wanted to point out to everybody that I think Judy's characterization of the adjudicatory part of the process was pretty right on.

In other words, the public can participate if they are given standing to be a party to that process. And Mitzi from our Office of General Counsel can -- well, I am getting into trouble here, but there is a opportunity for a limited appearance from the public.

Well, I am going to let Mitzi talk about this so that everybody is clear on this, okay?

MS. YOUNG: (Off microphone) Hi, I'm Mitzi Young, and I am an attorney in the Office of the General Counsel at the NRC in Washington. Judy, what you described is a limited appearance statement, and unfortunately that comes later in the process, and

after the parties in the proceeding have been identified.

When the application comes in and the NRC desires to adopt that application because it makes a determination after that we anticipate it would be a 90 day review, and the application has sufficient information for the technical staff to begin looking at whether it meets the NRC regulations.

And at that time we issue a notice in the Federal Register to the public, and we have attorneys who (inaudible), and that you have an opportunity to act. But unfortunately our hearings are not the type of hearings that you may be familiar with, in terms of DOE's proceedings.

A hearing is not a meeting where people get a chance (inaudible), and the Congressional process and the legislative process, where people come in and give testimony, and comments, and submit letters to us, where the tribunal makes the decision.

So those who participate in that proceeding have to reach certain qualifications for participation, and that is what Chip was referring to, to meet that standard. You would have to show that you might be harmed by the action that would be taken.

So there is the Federal Register notice

coverage for a 30 day period, and where you have to (inaudible) on the application being considered. In this instance, it would be both contention on safety of the repository at Yucca Mountain, and also on the NRC's decision on whether to adopt the environmental impact statement.

And so you have both safety and environmental. So that is how the public (inaudible), and anyone who wants to come in after that and wants to observe what is going on, our hearings are totally open to the public, unless they are those rare circumstances where it might involve classified or safeguard of information and not open ot the public.

And to a certain extent, you are absolutely correct, and (inaudible). And just like if you were to sue your neighbor in court, the Judge has to be clear that under the Constitution that you (inaudible), and that is the standard that (inaudible) and that this repository is going to be for the entire nation, and whether the entire nation should be in the hearing room.

And so there are qualifications, and issues that are to be considered by the 3-Judge panel at the NRC. I hope that clarification is helpful.

MS. TREICHEL: Well, I already knew

everything that you said before you began, and we have been following this very, very closely. I think it is misleading and should not be (inaudible).

And as it shows on your one slide, the NRC will provide full and fair public hearings, and people misunderstand that, and that is not the case. And unlike other court cases, this is --

MS. YOUNG: Well --

MR. CAMERON: I think that you might want to give a follow-up on how that statement might be misleading, okay?

MS. YOUNG: (Off microphone) Well, what we meant when we put the words, "the NRC will provide a full and fair opportunity for a hearing," it was that everyone in the nation has a chance to follow these (inaudible) -- and it is very difficult and a very complex issue that involves a lot of (inaudible) and for a repository of the first of its kind, there are a limited number of people who have familiarity in this area.

And so, yes, it can be difficult for lawyers sometimes, and the court (inaudible) and members of the tech team and members of the NRC staff (inaudible).

And so the full and fair adjudication or

judgment by the judges, and where the evidence presented in the proceeding shows that DOE has the burden of proof in this proceeding, as their are the license applicant, that (inaudible).

MR. CAMERON: Okay. Thank you, and I want to get to other people who have questions on this general point, and then we really have to move on getting to the substance, but let's go to Calvin.

MR. MEYERS: Good afternoon. My name is Calvin Meyers, and I am a member of the Moapa Paiutes. I am not a citizen of the United States, and I am not a citizen of the State of Nevada, and I am not a citizen of Clark County. I am a citizen of my tribe, which is a different country altogether.

I have plenty of things to say, and I know you don't have the time for me to comment on all of them, but there is one really important issue that I would like to address, because this has been going on for at least 10 years that I know of, because I brought it up at one of your meetings in Washington, and that is the trust responsibility, and whether you are going to live up to that or not.

Some of the things that really bothered me about the whole process, even just the mountain itself, is that you just look at the site alone. How

do you get there? Is there good Federal lands? Because if it doesn't, what is going to happen is that you are going to be coming over my lands, my ancestral lands.

And lands that we still use today for medicine, and to gather. We get together on a lot of things, and the only time we can get together is when somebody dies and at a funeral. This is a lot of times when we can only have social gatherings.

And people come not just from the surrounding area, but they come from other States. They come from Utah, Arizona, California, and some from Oregon, all over the country.

They have to travel to the reservation, and if something happens to the reservation, they can't come here anymore, and I myself would think that I was no longer needed because I can't practice my traditional ways of life.

And in practicing my traditional ways of life means that I should be able to pick the food that I eat, take the medicine that I need, and able to travel in safety.

And to know that that land that I am traveling on, or those foods, or those medicines are not contaminated with radiation. Those are some of

the things that I feel are very important.

And I agree with the public hearings stuff. I can comment on the things that are being said right now, but I can't comment on your book because you never sent it to me.

The same thing with DOE. Every meeting, and every time I get up to speak, I say the same words because nobody listens. It is either going in one ear and out the other.

If you want me to put my finger in your ear and kind of keep it in there for a second, I will do that. And I will ask that since you don't send us these materials that we really cannot make a comment to the materials because we don't know what is contained in those.

So I would also ask for a 10 or 15 year extension on the hearings because we have sent our own people to college to learn about your science because you don't want to help us. You don't want to work with us, even though the law says you have trust responsibility to every tribe in the United States. Thank you.

(Applause.)

MR. CAMERON: Some of the comments later on are going to talk about the issue that you raised,

about the protection of lands around Yucca Mountain from radiation.

And, Janet, do you have anything to say about trust responsibility, or Calvin's point is well taken, and what Calvin has told us about before? Do you have anything at all on that?

MS. SCHLUETER: Well, I would mention that our role requires that as part of the application the Energy Department showed clear title to the land, and that if must demonstrate clear and unencumbered access to the lands to ensure that -- while ensuring that the safety requirements under our rules are met.

And that is one portion of the license application that we would be looking at.

MR. CAMERON: And I believe that the Environmental Impact Statement adoption process we will get into, and some of the types of issues, tribal issues, that Calvin is concerned about?

MS. SCHLUETER: Yes.

MR. CAMERON: All right. Let's go to -- we will go to you next.

MS. CARTER: My name is Victoria Carter and I am a resident, and I don't think you can answer my question, that you had nothing to do with what is stored now, the stuff. So I would just like to say

God bless you and your staff for coming here.

MR. CAMERON: Thank you. And if you would please identify yourself for the record?

MR. PERNA: My name is Frank Perna, and I am a Clark County resident. I am going to bore you a little bit, as I am going to just go over some of the history.

Nevada has not had a fair and equitable chance since 1982, when the waste pact was established, and that waste pact said that whoever the majority leader would be, and the DOE would recommend and the President would accept the licensing process, he can't -- Senator Daschle today can't use procedural means or filibuster to prevent a vote in the Senate.

And so we were sold out in 1982. We were sold out in 1987 when they eliminated Texas and Washington because they had powerful people. Actually, it was an Indian bill to fight President Bush, number 41, and Speaker Wright made sure that Texas was eliminated.

And Tom Foley made sure that Washington was eliminated. So it started off with an unscientific process. How can you say, well, one place scientifically. When you hit a dead end, you can't go any further, but of course they didn't hit a

dead end, because as everyone has said, they ignored science.

And this process should never have been started since there were 293 scientific data deficiencies. Why did the NRC question it in some way? Was the NRC biased, and did they see that there was 293 scientific deficiencies and they allowed the process to go on?

I was in the audience in Cashman Fieldman's, and the DOE Secretary Abraham came in, and he didn't make himself really available to us, and before I knew it, he was out the door with two of his fellows.

So he didn't study up, and he didn't know nothing about it, and he is a former Senator, and he drew the Republican party line, and so he approved it. He said send the process up.

Then it goes to our President, who gives it half-a-day's consideration. I mean, that is disgusting. He gave it a half-a-day's consideration, and then he left overseas, and he started this whole process.

Now, before, Janet, you said that the NRC has a mission to protect our health and safety. And they make licensing decisions one step at a time.

Well, those 293 scientific deficiencies should stop you if you are using common sense instead of science, but that didn't happen.

As far as the DOE process, it would be funny if we weren't so angry about what the United States is doing to us. We have 49 States picking on the weakest State at the time, and trying to shove something down our throat.

Finally, the 10th and the 14th Amendments of the Constitution. The 10th Amendment is State's rights, and the 14th Amendment applies to guns, and legal protection under the law.

I hope that your 3-Judge panel will look into that, but I doubt it. I doubt it very much. We are not in the position where we have to listen to somebody, like our President, and Vice President Cheney who won't send anybody to the energy meetings.

And he won't give you any idea of what kind of conversations that he had with his friends in the energy industry, and talking about homeland defense, and anti-terrorist, and national security. And then to suggest that we should forget strategic planning, and forget that we are at war time for the next 10, 20, or 30 years, and we are going to transport nuclear waste across the country over rusty

bridges, deteriorating tunnels, and waterways.

And this is going to take three decades. This is nuts. How can you mention homeland defense in the same terms with transporting nuclear waste? How many train wrecks have we had in the last three months or so? No transportation is safe.

So for us to have to be subject to our present -- and I am talking about our President, and Vice President Cheney, Secretary Abrahams, and they are talking about homeland defense, anti-terrorism, and national security.

Now, during the DOE meetings, I brought up a couple of --

MR. CAMERON: I am going to have to ask you to just wrap it up, okay?

MR. PERNA: I brought up a couple of things that said that Yucca Mountain isn't safe in any case. We had red flag exercises at Nellis Air Force Base, and we have the Nellis Bombing Range, which is two minutes flight time from a plane loaded with fuel, and loaded with munitions.

You know who we train there? In the '80s, we trained Iraqi pilots. Now we train Kuwaiti pilots, Saudi pilots, 14 of whom crashed into our buildings, United Emirates' pilots. Who are these people? They

are our enemies and they are not our friends.

And yet they get trained there, and all they have to do is get the idea of veering a little bit and crashing into Yucca Mountain. That is the first thing that makes it no good.

The next thing that makes it no good is we are not taking into account the amount of suicides, and I would say that even with our own pilots that that might happen also.

An accident. When you are in training, more accidents happen than in combat. There is also tunnel blasts. Yucca Mountain is essentially a mining operation.

Every mining operation could have blasts, tunnel blasts. And at the National Academy of Sciences' meeting at Alexis, New York, they talked about 37-ton walls that were falling in.

Well, you can't have -- we have robotics, and we don't have human beings that could think, and you have to rely on robotics.

MR. CAMERON: I am going to have to stop you there.

MR. PERNA: Well, you see, the point is that I brought all of this up at the DOE meeting, and if you are not --

MR. CAMERON: Well, what I wanted is to have Janet specifically address the points that you brought up right now, one of which is can you put in context the 293 stated deficiencies that Frank is talking about.

And some of the rest of Frank's points are going to be addressed by the NRC speakers, who we really need to get to in terms of the substance of this review plan. So can you just address the 293. And I think we really need to get to Jeff Ciocco.

MS. SCHLUETER: The number 293 warrants clarification. We see it in the press all the time, and I would like to take just a minute to explain what that is.

The NRC has had as I mentioned public interactions with the Energy Department to identify information that still needs to be gathered, and that we would expect to see in the license application.

As a result of that process, the NRC has been the one who has identified 293 areas where additional information needs to be gathered and obtained. The complexity of those items varies; from a modest effort, to a more extensive effort.

The Energy Department, during those public meetings, has agreed to provide the NRC with that

information corresponding to the 293 areas, and those are all documented in publicly available summaries of those meetings which are on our website.

So that is an NRC created number, and as I said it is information that we would expect the applicant to have addressed in the license application by the time that they submit it to us.

MR. CAMERON: Okay. We have one final comment or question on process.

MS. TILGES: Kalynda Tilges, Citizen Alert. Unfortunately a couple of people that I wanted to speak to just left. A woman who was here had the false idea that the NRC had something to do with the waste on-site.

They oversee that waste on-site. They oversee it and they license the storage, and they oversee all those spent fuel from all those nuclear reactors, including 3-Mile Island.

The other point is that in hopes of expediting this whole thing today, I would like to see when you all get a question that you answer it completely and honestly, because we have already seen once today that we had to take a really long time to clarify to someone a dishonest answer that you gave them.

And at last night's meeting that I was at in Pahrump, we spent a really long time clarifying at least two dishonest and incomplete answers that you gave the public.

So if you really are unbiased, and you really are a public agency, and you really want us to feel like you care about us, first of all, you are going to have to do an awful lot of work.

But it would start with giving us honest and complete answers. And if you are curious, I can go into the dishonesty that was at last night's meeting, and I certainly hope not to see any more of it today.

MR. CAMERON: We are trying to be as complete as possible, and I would just have to say from a Facilitator's point of view that I don't think that anybody is trying to be dishonest with anybody. Mike, did you have a question?

MR. HARDT: Yes. My name is Mike Hardt, and I hate to see an hour and 10 minutes go by without a relevant comment to the content of the review plan.

And I would ask if we could return to Slide 14, or rather Slide 10. This concerns how the DOE would accept -- how the NRC would accept the application.

It notes in there that you would determine whether it contains all the required information, and I know that on page 22 of the plan that it talks in there that you evaluate all of the different sections, and there is different categories of information they provide.

And you would determine kind of section by section whether it is complete or incomplete, and whether there is additional information required. It is not clear in the plan whether if you concluded that one of those sections was complete and adequate, whether you would then embark upon the technical review of that information.

And while you were waiting for, perhaps other information to be submitted on incomplete sections. And I guess the first part of the question is when do you begin the technical review of the completed portions of the application, and if you would begin the technical review of those completed portions, is the clock actually starting then, or is it when all of the information is finally determined to be complete? Thank you.

MR. CAMERON: Who wants to -- Jeff, do you want take that and then get into your presentation, because I think Mike is giving us some good advice

here. It is time to move into specifics of the Yucca Mountain Review Plan. So, Jeff, if you could try to -- if you could incorporate the answer to that in your presentation.

MR. CIOCCO: I will get to that in Chapter 3.

MR. CAMERON: Okay. Go ahead. And, Mike, if we don't answer the question, please let us know.

MR. CIOCCO: Okay. Good afternoon. My name is Jeff Ciocco, and I am with the Nuclear Regulatory Commission. I an going to give you an introduction into the Yucca Mountain Review Plan, and it is a draft report, and it would be our job, and the NRC's job, to assess the safety of the Yucca Mountain site.

This is what the document looks like, and it an approximately 500 page document. We have hard copies over here, as well as CDs, and is available on our website.

To begin my presentation this afternoon, I am going to tell you about the purpose of this public meeting, and I am going to go through the purpose and content of the Yucca Mountain Review Plan, and I will tell you what is covered in it, and what isn't covered in the review plan.

And I will explain to you how the Yucca Mountain Review Plan is risk-informed and performance-based. I will go through a general explanation of the five chapters of the review plan, and then I will explain the structure of the individual sections.

I will tell you how to comment on the review plan, as well as give you an introduction into the following presentations.

The purpose of this public meeting is to describe to you the purpose and content of the Yucca Mountain Review Plan. If you are not familiar with the plan, we hope you leave with an understanding of what is in the document.

If you are familiar with it, then you will get a better understanding and if we can answer any of your questions. We seek your views on how well this plan would assess the safety of the Yucca Mountain site.

One of our principles for good regulation is openness. Nuclear regulation is our business and we want to make it available to you as one of NRC's decision making tools in this project.

The purpose of the Yucca Mountain Review Plan is to instruct the NRC staff on how to conduct a thorough and complete safety assessment on the Yucca

Mountain site.

The plan ensures a quality review, and it is tailored specifically to the regulation for the Yucca Mountain site. The plan ensures uniformity of reviews because it follows a very similar format for each individual subsection and section of the regulation in the plan.

And next we want to make our strategy publicly available to you, and finally, the Yucca Mountain Review Plan provides guidance to the applicant on what needs to be submitted in its license application.

And that it is really Chapters 3 and 4 of the Yucca Mountain Review Plan that are specified specifically in the regulations. Chapter 3 is the general information, and Chapter 4 is the safety analysis report.

However, this plan is not a substitute for compliance with the regulations. It is NRC's guidance document on how we would review a license application.

So in summary, the Yucca Mountain Review Plan lists the information that is required for a license application, and what is the acceptable criteria for a license application, and it provides a step-by-step review procedure for the NRC staff to

determine compliance with the regulations.

Next, the scope of the review plan. The Yucca Mountain Review Plan would be used for all phases of the licensing process, and as Janet talked to you earlier about, there are three phases of licensing, and we would use this plan for all three phases.

The first is the construction authorization, or the building permit phase. The second is the license to receive and possess nuclear materials. We would use specific portions of the Yucca Mountain Review Plan in order to evaluate DOE's demonstration of how they would substantially complete a construction of the above-ground and below-ground facilities, and any update of that performance.

And the third phase is the amendment for permanent closure. So this plan is to intended to cover all phases of the licensing process.

What is not covered in the review plan? The site recommendation process. As you know, that is a process that is currently under way in Congress. This plan would be used if and when a license application would come to the NRC.

The environmental impact statement is not within the scope of the Yucca Mountain Review Plan.

And Janet also talked about that the NRC has regulations and a process to review the environmental impact statement. This document assesses the safety of the site and not the environmental portion which must accompany a license application.

And the last area is the transportation issue. Transportation is jointly regulated by the NRC and several sister agencies of the U.S. Department of Transportation. This is separate from the Yucca Mountain Review Plan.

This plan would assess the safety of the site once the waste is received, and it would assess the safety during the operations, and the disposal of the waste.

Next, how is the Yucca Mountain Review Plan risk-informed and performance-based? We use these four words at the NRC in writing its regulations and in conducting compliance reviews.

First I want to say is that the plan provides for review guidance on site specific regulations. We say that the regulation is written for performance-based, and the regulations were written because of the risk of health effects to individuals, are the basis for the objective safety criteria in that regulation.

For example, the EPA standards for the criteria in our regulations for individual protection, ground water protection, and for human intrusion.

Next, the review plan applies these safety criteria and applies EPA standards for acceptable compliance demonstration. So in that case we are saying that the review plan is performance-based.

And finally we say that a review plan is risk-informed because the staff focuses its reviews on areas that the staff feels are most important to safety.

For example, the staff may focus its review on the process of water dripping through the mountain, and dripping into the tunnel on to a waste package, or the staff may focus its review on the corrosion of the waste packages.

The NRC's reviews are comprehensive, but there are certain areas where the staff may focus its compliance review.

What are the main chapters of this plan? Well, there are five chapters. Chapter 1 is the introduction. It provides an overview of the NRC's licensing philosophy.

For example, the NRC did not select a site or designs. And also the NRC's reviews are

comprehensive and focus on issues most important to safety.

It also says that the NRC will defend its licensing decision, while the applicant, the U.S. Department of Energy, must defend its safety case in its license application.

Chapter 1 also talks about the our general licensing review procedures, and how each section is risk-informed and performance-based.

Chapter 2 is the acceptance review. It is the first screening of the license application with an acceptance checklist based on the regulations in Part 63.

It determines the completeness of the information for the engineering design, and in terms of if there is sufficient information available to conduct a detailed safety review.

The results of the acceptance review is that we would accept the license application for a detailed technical review, and we would accept the license application, but request additional information.

Or we would reject the license application because there was not adequate information for a detailed technical review, and in our letter back to

the applicant, we would specifically describe corrective actions if the applicant would like to resubmit its application.

Now, the question that I heard was if we would accept a license application for a detailed review; however, we had a request for additional information, then when would the clock begin for the 3 year review period. Did I capture that correctly?

MR. HARDT: I guess there were two parts. The first part as I understand it is there are several different categories of information.

MR. CIOCCO: In the chapters, correct.

MR. HARDT: And different criteria for reviewing those. It appears as though you could determine that one section of information wasn't complete, and then my question is would you then embark upon the second review of that section while perhaps you are waiting for additional information on another section?

MR. CIOCCO: Yes, we would.

MR. HARDT: And if that were true then, would the clock start at that point; and where you would start a detailed technical review of any section on the application, would you have to wait until you had all of the information for all of the sections

before the clock starts?

MR. CIOCCO: Well, as to whether the clock would start on a request for additional information, and whether the clock would start before we get the information in from the RAI, request for additional information?

MR. CAMERON: And it is all related to when you decide to docket. And for people who may not know the background on this, when Mike refers -- and, Mike, correct me if I am wrong, but when Mike refers to when the clock starts ticking, what he is referring to is that the Commission has 3 years from a certain point to review and make a decision on the Department of Energy's license application.

So that is what he is talking about when he is talking about the clock ticking. Now he is asking when does the clock start ticking relative to the need for more information, or a request for additional information. Mitzi, if you could answer that.

MS. YOUNG: (Off microphone) I think I understand your question. In an NRC licensing phase, when an applicant submits an application the determination is made whether the application in general contains enough information for the NRC to

begin its review.

And if there are some details or clarifications that are required, that could be done after the decision is made to docket it. So it really depends on what the information deficit is and the timing of it

So your question or example is that if you have one area where you have all the information, and there is another area where there is information gaps, I think with a repository, and a repository study (inaudible), that might be the type of information that could be open or pending at the time the decision is made to docket.

So it really depends on the nature of these information gaps, and whether the NRC makes a decision on whether they can docket the application. It is a hard question to answer the way that you have put it.

MR. HARDT: I would then just recommend that the plan might be more specific, or you might clarify what happens, or when does the clock start, I guess, and when is it docketed, because it really is unclear right now when that would actually occur.

MR. CIOCCO: That is a good comment. Thank you.

MR. CAMERON: Thank you, Mike. We are on questions on the -- oh, okay.

MR. CIOCCO: We are now on Chapter 3. Chapter 3 is the general information. Chapters 1 and 2 aren't required information for license application. Chapter 3 is the first part of the information that is required in the license application.

The purpose of Chapter 3 is two-fold. It is to provide an overview of the engineering design concept, and it is to allow DOE to demonstrate its understanding of the influence of the site characteristics on the engineering design and the performance of the repository.

And also it contains two sections, Section 3.3 and 3.4, regarding the safety and security of the site, against theft or sabotage, and the material control and accounting programs. I will have a page later on that.

Chapter 4 is the main body of the Yucca Mountain Review Plan. It is a safety evaluation chapter, and it is this much of the document, and probably two-thirds or three-quarters of the document are for assessing the safety analysis report.

And the following presentations are going to provide you an understanding of what is in those

sections, Sections 4.1 through 4.5. And finally there is a glossary, where you will find about 300 terms, technical terms, that are used in the document.

Next is the structure of each individual review section in the plan. Each section of this plan is very similarly structured to provide uniformity of reviews, and it includes the areas under review, which is the scope of that section.

Next is the review methods. And it is the step-by-step procedures which the staff would follow to assess compliance with the regulations. Next is the acceptance criteria, and it defines the acceptable demonstration of compliance by the applicant.

Then we have the evaluation of findings. It documents inclusions of the staff's evaluation of all of the information. It would contain a listing of all of the information reviewed from that section, and it would describe the basis of the NRC's conclusion, and it would include a findings statement or conclusion statement.

And lastly we have a reference section, which lists all of the references used for that particular section. And there we site other documents, other NRC or nationally recognized standards in the review plan.

And the next slide is how to comment on the Yucca Mountain Review Plan. That has already been commented on at this meeting, but we have comment forms, and you can do it electronically on our website; or you can submit comments in writing to Michael Lesar.

And finally the comment period ends June 27th, and we did receive a comment last night to extend the comment period. And in conclusion the NRC seeks your views on this plan.

There are going to be four presentations following mine, and the are going to cover safety during operations, and also known as pre-closure period, and that would found in Section 4.1.

And long-term safety, and that is found in Section 4.2, also known as post-closure. I will be giving a presentation on assessing security from theft and sabotage, and that is the physical protection program, and material control and accounting program.

And then Pat Mackin is going to wrap it up with the adequacy of monitoring in the plan.

MR. CAMERON: All right. Thank you, Jeff. This is sort of the bird's-eye view of the methodology, and the objectives of this review plan.

We are going to go into the specific

sections, but before we do that, is there a question on this methodology format? Judy.

MS. TREICHEL: (Off microphone) When you talk about the ticking clock, what happens if it runs out?

MR. CIOCCO: There is a 90 day period for an acceptance review, and there is a 3 year for us to write our safety evaluation report.

MS. TREICHEL: At the end of your 3 years and you are not done, you get an additional year, and what if you are still not done?

MR. CIOCCO: There is an option for an additional year.

MS. TREICHEL: And you get that year and then what? I mean, the clock starts ticking on DOE, and should Congress override the Governor, and they have 90 days to submit this license application, and you all know they are planning to be more than two years later, what if you decide to go five times over your 3 year limit?

MR. CIOCCO: My management has not given me that option, and maybe Mitzi from General Counsel has a response to that.

MR. CAMERON: Let's go to Mitzi. What happens after we use the one year extension, and we

still have not reached a decision?

MS. YOUNG: (Off microphone) I honestly don't know, but we have right now a statute that gives us 2 years You are initially given 3 years to make a license decision, and the Commission issues regulations, and our adjudicatory section of our agency; and 10 CFR Part 2, and those of you who are familiar with our regulations, which gives the schedule for the hearing, and it starts the clock when we notice the application (inaudible), and that is when our 3 year period runs.

Actually, the period that the Commission has this regulation (inaudible), and right now it is 3 years and change, maybe 15 or 30 days. I can't remember right off the top of my head.

It is our responsibility to the Congress to give a report, and which can be extended for one year, which was already mentioned. But I would say that the Commission would -- if it took longer, that there would be another report to the Congress indicating what time period.

But the Commission's intention in issuing its regulations, and particularly in organizing the licensing support network, which takes all the documents related to the nuclear waste repository, and

studies done on that, and in advance of even docketing the application, would be an attempt to do what is called discovery in litigation at the front end.

So the actual time it would take to litigate the application would be shorter than the hearings (inaudible.). So it is a whole-hearted attempt by the NRC, the Commissioners and the staff in writing the regulations, to try to make sure that that period is as close to the 3 years as possible, and to go before Congress to ask for additional time.

MR. CAMERON: The operable part we don't exactly know, and there would probably be another report by the Commission on it. Janet.

MS. SCHLUETER: Yes, that is entirely correct, everything that Mitzi discussed. However, it is very important to keep in mind that the NRC's licensing decision, which is our safety decision as the independent regulator, will not be determined by a clock.

In other words, if we are not ready to make that decision in a 3 or 4 year time period, it would require that we go back to Congress and ask for an extension and indicate time language we believe we could complete that activity.

But we will not make that decision until

we are ready to do so. We won't be driven by a schedule. The safety of the facility is the primary objective.

MR. CAMERON: Okay. Thank you. Let's have one last question and then let's go to the first substantive presentation, which is on safety in Operations.

MR. BECHTEL: Dennis Bechtel, a Henderson resident. I had an opportunity to watch the hearings over the last couple of days about the review, and I guess how Congress perceives the process.

And I get the distinct impression, and this may be an understatement here, that some of the -- that now that they are almost to the point of licensing that the repository is pretty well on the road. It is going to happen.

And if you listen to certain Senators, that is the definite impression that you are going to get. So I feel personally that DOE and Congress has ducked the suitability decision, and so the NRC is the last line of defense as I see it.

And I think the concern -- and again going back to the process, but there are a number of statements in your document that I will try to comment on a little more rigorously by your statements.

It says, "During the acceptance review, the NRC does not determine the accuracy of the information." So I guess the question is who does and when?

MR. CIOCCO: The NRC will, and it is detailed in the safety analysis report, and Part 2 of the regulations, there is an acceptance review to the acceptability before we begin our technical review.

MR. BECHTEL: And there is also other statements. It says that the NRC is not seeking scientific precision. That sort of bothers me, too. We are talking about a first of its kind facility, and we are talking about something that is going to affect many people over the years.

MR. CIOCCO: Right.

MR. BECHTEL: And I would think that again being the last line of defense as I see it, you know, that there seems to be more rigor in how it is described, or that there be some rethinking of the process to make sure that these things actually happen. And there are a couple of more --

MR. CAMERON: Dennis, he is on this particular issue, and I --

MR. BECHTEL: Well, again, I am not sure where these things fit in, you know.

MR. CAMERON: Usually we have a little bit more flexibility, but we do need to get some of this on.

MR. BECHTEL: Okay.

MR. CAMERON: And we have your statement that we are attaching to the transcript already. Could you just give us one more, and then see --

MR. BECHTEL: Well, one more and I actually have a couple of recommendations, too.

MR. CAMERON: Good.

MR. BECHTEL: The NRC has no power to tell a licensee to come forward with their proposal, and again that is a concern. You know, getting into how you described things -- accept, reject, accept, and request additional information.

Well, in my mind, accept and request additional information is not accepted. It is not necessarily a rejection, but it is not normally an acceptance.

And I think statements like that are going to give the public, and definitely the Congress, are going to get the wrong impression, that okay, maybe it is just some minor thing.

Maybe it is some minor thing, but I think that chronology needs to be revised a little bit. And

I guess the last thing is that it would have been helpful, or it will be helpful I think to me in reviewing the document further that if you have sort of process background.

I mean, you have things in the organization format that I understand, but how do you actually go through the process, and gee, you have a problem here, and how does it stop. I think that would be helpful in trying to condense a lot of words that are in the document.

The other thing is the final environmental impact statement. I know that we several years ago had an opportunity -- Clark County had an opportunity to submit testimony, as did the other affected governments.

And as I understand it, the NRC more or less agreed with some of the comments that we had on EIS, and I didn't see those resolved in the final EIS for Clark County or for you all.

And I am wondering that since the EIS is part of the licensing package that even if the license is fine, you have the environmental impact statement that is not fine, and where does that place the license?

I mean, the environmental part of it, and

the context part of the community is very important, and the license could be totally hunky-dory, and if the rest of it is not adequate, in my mind that would still leave some question about the adequacy of the whole package.

MR. CAMERON: Dennis, I see where you are coming from. Those are great comments, in terms of the process diagram, and I am going to put the EIS issue that you raised in the parking lot right now.

And as Jeff mentioned the EIS issues are not covered by the review plan, and hopefully we will have a chance to come back and address that. And please give us the rest of your comments at the appropriate time when we get to these things. Thank you.

MR. BECHTEL: Okay.

MR. CAMERON: Let's go to Pat Mackin to talk about Safety in Operations.

MR. MACKIN: Good afternoon. My name is Pat Mackin, and as was mentioned earlier, I work for the Center for Nuclear Waste Regulatory Analyses, and I just want to clarify to you all that we were established specifically to assist the NRC in an independent safety review for any license application for a repository at Yucca Mountain, and that is what

our job is.

The regulations relating to Yucca Mountain basically split the lifetime of a repository into two periods. One that would comprise construction and operation, and the other would be after it woud be closed.

I am going to talk about that period during construction and operation, and then Tim McCartin of the NRC is going to talk about after we close.

Now, the purpose of what I am going to talk about today is to give you an idea of what the scope of the information is that the NRC will look at in its safety review, and the Department of Energy will have to have included in its license application.

But before I start that, many of the things that would go on at a repository are the same things that go on in many other nuclear facilities around the country and the world today; handling spent fuel; packaging spent fuel; protecting workers and the public from radiation exposure.

So there is a lot of experience and information on how to do these things, and we have incorporated that into the Yucca Mountain Review Plan.

I am going to talk about five aspects of

safety during construction and operations that occur in the Yucca Mountain Review Plan. The first of these is pre-closure safety analysis, which is a set of techniques that are used not only by the NRC, for the safety of complex facilities.

Next I am going to talk about who would operate such a repository, and what their qualifications would be, how they would be trained. Then I am going to talk about how a repository would be operated.

Then I am going to talk about DOE requirements to demonstrate the capability to retrieve waste that would be put in a repository, and to store it in an alternative location.

And finally I am going to look in the long term to address the need for the Department of Energy to discuss in its license application how it would go about building a repository so that the surface facilities could be dismantled and be decontaminated in a way that would protect workers and the public.

Now, I will discuss each of these in more detail. First, the pre-closure safety analysis. This is the way that NRC regulations require the Department of Energy to demonstrate that it meets the public health and safety standards.

A pre-closure safety assessment addresses three questions, and DOE will have to answer these questions, and the NRC will evaluate whether they were answered properly.

The first is what could go wrong in a repository. The second is how likely are those things that could go wrong, and the third is that if those things go wrong, what are the results.

And by results we mean radiation doses to workers or the public. The techniques for doing a preclosure safety analysis are taken from other industries.

The chemical industry uses these techniques to assess chemical facilities, and the petroleum industry uses them, and the NRC uses them for other kinds of nuclear facilities.

The NRC staff has been trained in how to use these techniques, and the success records is why they were placed in the Yucca Mountain regulations.

Now, a safety analysis does several things. First of all, it looks at what can go wrong; what are the hazards, both man-made and natural, or the events and the sequence of events that could happen at a repository.

Examples might be a crane fails and a fuel

rod drops. Another example might be a vehicle that is taking a waste canister down into the repository and has a brake failure.

Others might be fires, and explosions, and all of these things DOE must examine in its safety analysis.

The next thing a safety analysis does is that once you have identified the things that can go wrong, you look at how likely they are that they could happen.

The next step then is to look at what the results are if those things happen. What would be the impact, and the radiation doses to workers or the public.

Then from that information the Department of Energy has to identify what those pieces of equipment, machines, components, are that are necessary to be operating to protect people.

Those are defined as items important to safety and they play a major role in what goes on from here on. Once this part is done, the next step is to compare the consequences, the radiation doses to public health and safety standards.

The NRC would not license a repository to be constructed and operated if the Department of

Energy did not demonstrate that the public health and safety standards would be met.

And finally for those items that have been defined as important to safety, safety reviews of the design would be conducted.

So that is what a pre-closure safety analysis does. The next thing that I want to talk about is who would operate a repository, and how they would be trained.

There are a number of things that the Department of Energy must show here, and that the NRC would evaluate. The first of those is the Department's own organizational structure, and who reports to who.

What is the chain of command, and what are the responsibilities and the delegations of authority? Next, I mentioned earlier that certain things at a repository would be identified as important to safety.

The Department of Energy has to show that all of those things that are under safety comes under somebody's control, and then it has to show that the people who are responsible for those items of safety has demonstrated what the job requirements are, the prerequisites to hold those positions, and what kind of qualifications they have to have.

Next, we look at how the Department of Energy would select and train workers for working at a site. I mentioned earlier that many of the operations at a repository are similar to what goes on in other places around the country and the world already.

Well, a lot has been learned about how you need to train people to operate a nuclear facility. What has been learned as in fact been written into the review plan.

The Department of Energy would have to demonstrate how it would hire people, train them, re-qualify them, and document that they are properly trained.

They have to have a training program that is accepted by the NRC. Finally, any worker at any nuclear facility has to be trained in the hazards and the proper handling of radioactive materials.

The Department of Energy must demonstrate that it has a good program for doing that at the Yucca Mountain repository, and the NRC will examine that program.

Next. I want to talk about who would operate a repository, and how the Yucca Mountain Review Plan would examine how a repository would be

operated.

First of all, as equipment starts to be installed if the NRC grants a construction authorization, that equipment has to be tested, operated, and procedures have to be checked before any radioactive waste could be brought to the site.

So one thing that the department must provide is a plan for start-up and testing of components. The NRC will evaluate that. Second, just like for our cars, you have to do periodic maintenance. It is not enough to just buy a car and drive it. You have to test periodically.

So those components important to safety have to have some periodic program of testing their operation to make sure that they operate in the right specs.

DOE has to present a program for how it is going to do that. That program has to show how often things will be tested, and how they will be tested, and what the qualifications of the people doing the tests are, and what the acceptable results are.

Next, anything important to safety of workers and the public at any nuclear facility have to be done using a formal procedure. There even has to be a procedure for how you write procedures.

Those procedures have to have things like: what is the sequence of operations? What are the tools that you need? What are the calibration requirements? What are the qualifications of the worker that is doing that test?

What are the results supposed to be? What do you do if the results aren't satisfactory? So the Department of Energy is going to have to demonstrate that it has an appropriate program for developing and using procedures that are important to safety, and how to do that is written into the Yucca Mountain Review Plan.

I mentioned earlier that the pre-closure safety analysis looks at what could go wrong at a repository. Well, if something can go wrong, you have got to have a plan to do something about it.

So again all nuclear facilities have to have emergency plans. There will have to be one for Yucca Mountain. The NRC has staff whose expertise is specifically the examination of emergency plans, and those criteria have been written in the Yucca Mount Review Plan.

Calvin mentioned earlier about questions of access to Yucca Mountain, and land use. DOE has not presented any of those plans yet, but they will

have to in their license application, and the NRC's view in reviewing those is that certain things have to be able to be done.

One is that the waste has to be protected from disturbance, and the second is that people would have to be protected from the waste. So those would be the considerations the NRC will use in evaluating any land access plans.

And finally in building a repository, we have complex evolution, and things will have to happen in certain sequences. The Department will have to demonstrate its schedules for building and constructing a repository, and the NRC will examine them to see if they make sense and if they will work.

The next thing that I want to talk about is a requirement in the regulations that DOE be able to show the capability to extract the waste from the repository and store it somewhere else if something goes wrong.

The Yucca Mountain Review Plan gives guidance to the staff on how to examine these plans, which the Department must present. And the staff will look at the process the DOE proposes to use, and look at the plans for alternate storage of the waste, and look at how those activities would protect workers and

the public.

The last aspect of the pre-closure safety operations that I am going to talk about in this presentation is a look to the distant future. If the NRC grants a license to construct and then to operate a repository at some date it would have to be closed.

It might be a long time in the future, but right now the regulations require that the Department present its design features and plans for ensuring that when that time comes that the surface facilities could be dismantled and decontaminated in such a way that workers and the public would be protected.

So I have talked about four specific areas that are unrelated that would affect safety of operations at a repository. The Yucca Mountain Review Plan examines all these, and it makes use of what has already been learned around the world and around the country for these facilities as a way to intimately assess how DOE proposes to operate their repository. I would be glad to take your questions.

Yes, Ma'am?

MR. CAMERON: Mary.

MS. MANNING: (Off microphone) From what I have read and from what I have heard about the plans this afternoon, and my question is are you going to

require the Department of Energy the worst case scenario on every part of the operation (inaudible), and second, how are you going to do your risk assessment; i.e., the amount of radiation, and heavy metals in the area water, and so forth.

MR. MACKIN: I may ask Janet to amplify what I say, but in general the NRC doesn't require a worst case assessment. It requires reasonably conservative assessments of what can go wrong, and the regulation provides guidelines on what the likelihood is of events that have to be considered.

So the reason that I think that the NRC stays away from worst case is because if you name a worst case, I can come up with something worst, and you can come up with something worst after that.

And so you don't get an effective way of looking at what can go wrong, or no facility or anything would be built. So they look for a reasonable conservatism considering the things that could happen.

I think that to my knowledge of the safety assessment process is the methods that are used to identify what could go wrong are comprehensive.

Somebody here earlier today mentioned the issue of the air range. Certainly DOE would have to

And using those assumptions in lieu of realistic evidence. In a September 28th comment to NRC Chairman Richard Meserve, the advisory committee warned that "the inconsistent use of conservatism" throughout the DOE's models "makes it difficult to identify the issues that are important to risk and precludes a risk-informed analysis of the proposed repository on the basis of evidence."

I will move along here. In a subsequent letter to, George Hornberger, who is the chairman of the advisory committee on nuclear waste wrote in a subsequent letter to Meserve that absent a realistic evidence and science-based analysis, and inferring that is not what the DOE has done, the question of how safe is the repository is unanswerable.

In the DOE's performance assessment, "the spirit of calculating the real risk was not evident."

Now, conveniently for the DOE, it doesn't have to calculate the real risk. Realistic risk analysis isn't a priority in this review plan either.

The plan instead allows DOE to base its license application on the same heavily criticized conservative assumption-based performance assessment that the DOE relied on in the site recommendation.

Particularly in Section 4, the plan itself

NRC.

MR. HERESZ: And you are with the Center for Nuclear Waste Regulatory Analysis out of San Antonio, or someplace down there?

MR. MACKIN: Yes.

MR. HERESZ: And how long have you been working with the NRC?

MR. MACKIN: The Center for Nuclear Waste and Regulatory Analyses was established in 1987 specifically to support the NRC's high level waste program. It is actually what is called a Federally-funded research and development center.

We were established by the NRC.

MR. HERESZ: So your funding is contingent upon NRC, and you are not in this for profit?

MR. MACKIN: In fact, our parent organization, Southwest Research Institute, is a not-for-profit organization.

MR. HERESZ: Oh, really? I thought they were out there to make some money.

MR. MACKIN: We have to make enough money to pay our workers and buy state-of-the-art equipment, but we don't have public stock or anything of that nature.

MR. HERESZ: Okay. So by the nature of

your relationship do you have any political appointees with your organization?

MR. MACKIN: No, we do not.

MR. HERESZ: Okay. Thank you.

MR. CAMERON: Judy.

MS. TREICHEL: There is not a lot of information on how to retrieve waste, and the Department of Energy thinks that will improve public confidence. And you mentioned many times during your presentation, and it was mentioned in other presentations, is this more than a paper exercise, or will the NRC have to see this being done?

Because I know that at some of the dry cask facilities there has been a need or there should have been a way to remove waste from a dry cask and repackage it, and it has never been done.

And all the EIS that the Department of Energy did, and all that they say about retrieval is that it is the reverse of placement, and as a non-scientist, I think that is not correct.

MR. MACKIN: The Department of Energy is not required by regulation tp provide a detailed design showing what it would use and so forth to retrieve a waste package.

One of the reasons is, I believe, is what

would cause retrieval to take place is unknown at this time. So it must show and convince the NRC that it has the capability that the design will allow for the retrieval of the waste.

MS. TREICHEL: Well, nothing is going to convince the public, and I am one of them, unless -- I mean, this is all remotely done, and unless you can somehow show that -- and I definitely think that has got to be a requirement.

People are clamoring for full-scale testing on transportation tests and so forth, but this retrieval idea, it is definitely not just the reverse of inplacement, and I don't think you make a convincing case that they can do it and you can't see it.

MR. CAMERON: Okay. Thanks, Judy. We are going to go to Commissioner Herrera.

COMMISSIONER HERRERA: Thank you, and I of course appreciate you all holding this public hearing. Let me first state my unequivocal opposition to the plan, which has been pretty well stated. I also have a question on the context of some of the historical context of the process.

In particular, I know that -- and I am going to refer to the environmental impact statement,

and I know that is not part of your perview.

But you mentioned that if the DOE submits a license application, and you all find a deficiency with a portion of their application, then they have the responsibility to address the deficiency, correct?

MR. MACKIN: That's correct.

COMMISSIONER HERRERA: Okay. And I asked that because when the environment impact statement process began, Clark County submitted comments to the EIS, and never received a response to our comments.

Instead, what we received was an acknowledgement of the comments, and were cataloged, but no response to the comments have been submitted. Now, what assurance can you provide the residents of this county that if in fact there is a deficiency, that the rules just won't be changed to no longer have deficiencies?

And it is a well-founded question, because when this began it was supposed to be a geological repository, and then we have seen that when the DOE has found some barriers to a geological repository, got the NRC to back off so to speak, and to allow them to engineer around the geologic barriers, and the NRC has complied.

So what kind of assurance can you give

folks here and folks in Southern Nevada that the NRC just won't give a cursory treatment to the application issues that are identified throughout the process?

MR. MACKIN: I would be glad to answer that, but perhaps Tim McCartin or Janet Schlueter would like to. I would say that probably -- I'm sure that the people here would not agree with your statement that the NRC backed off regulations because DOE could not meet the previous regulations.

COMMISSIONER HERRERA: And in the original policy act, it was supposed to be a national geological repository, correct? Is that a correct statement?

MR. MACKIN: Yes.

COMMISSIONER HERRERA: And then when the DOE found it difficult to comply with the conditions of your original policy act, which required a geologic repository, they submitted an amendment to that plan for the NRC to allow them to engineer barriers, or issues that required them as a result of its requirements to have a geologic repository.

And rather than the NRC referring back to the policy act that mandated that this be a geologic repository, they basically allowed DOE, you know, to modify its request, and you all allowed them to

modify.

And I am not suggesting it is a relaxation standard. What I am saying is that it is a different standard than is now being applied. What would prohibit that from happening if future deficiencies are found, because in fact they will be found based on the track record of the Department of Energy?

MR. CAMERON: That is an excellent question from the Commissioner, and first of all, I think you may be useful for one of us to address the first issue of the multiple barriers, but then also for one of us, and perhaps Tim, to talk about the stability of the regulatory framework, because I think the Commissioner is asking about it.

And I am going to ask Tim to talk about the multiple barriers, and then ask Janet or whoever would like to address the stability of regulatory framework. Tim.

MR. MCCARTIN: Tim McCartin, NRC staff. And the current regulations do require that the repository be comprised of both natural and engineered barriers. Natural barriers are most associated with the site, and with the geology, and that is still in the regulation.

The regulations as you know don't have any

specific numerical value for what the geology needs to provide. But it is in the regulation, and the regulation defines barriers as those that prevent or substantially delay movement of water or radionuclides.

So I would say that the regulations require that the geology has to provide a substantial capability to affect safety. And I would say that if we look back at why did they end up this way, the National Academy of Sciences, in their recommendation for Yucca Mountain standards, specifically spoke to the NRC, and they advised the NRC against putting in any particular numerical values for barriers.

Subsystem requirements is what they were called in the National Academy of Sciences' report. And the reason for that is that they felt that the Department of Energy should have the flexibility to provide the greatest amount of safety that they can through all the barriers.

And the best example is the previous regulation that the National Academy of Sciences was talking to was that he waste package had a 300 year requirement for the lifetime of the waste package.

And 300 years is relative to if we look now at what the Department of Energy is estimating, is

many thousands of years, way beyond the requirement that we had in your previous regulation.

So I think that's where the National Academy of Sciences said don't give a particular value, because they will try to shoot for just that boundary, and you will get a greater safety product encouraging a more robust safety case, where they try to get as much safety out of all of their facilities.

COMMISSIONER HERRERA: So in essence is it is a subjective standard that may shift according to issues that are identified by the process?

MR. CAMERON: Why don't you clarify on that and then there is another piece on this that I think is important. Go ahead

MR. MACKIN: You are correct that there is not a specific numerical number, and that would be something that is determined through the licensing hearing.

COMMISSIONER HERRERA: Can I ask a follow-up question?

MR. MCCARTIN: Certainly. We have some more information about where the "shift" developed and we want to share with everybody, too. Why don't you go ahead and ask your question.

COMMISSIONER HERRERA: My follow-up

question is if in fact as Secretary Abraham has held that Yucca Mountain is geologically suitable for the nation's nuclear waste repository, then how can the NRC, the DOE, and other agencies involved in the site assessment now not rely on the geologic position on the site itself?

MR. MCCARTIN: Well, the regulation requires that there has to be some natural barriers, and the capability for that at the site. So there will be a geologic component to our evaluation of the Yucca Mountain site, and the safety of the Yucca Mountain site.

COMMISSIONER HERRERA: But if engineering is a substantial portion of the process, then any site in America could be identified and engineered around those barriers to a certain degree of safety as well, correct?

MR. MCCARTIN: No, unless there is a substantial component that the geologic barrier has the capability to provide, the NRC could not license it based on not having multiple barriers.

And I guess I would like to draw an analogy to fire protection if you will. So I realize that some people have questions about if the waste package lasting beyond 10,000 years, it is not a

geologic repository. It is just a waste package.

And I would say that is not true, and I would point to an analogy with fire protection. Buildings are designed to let fires burn through; electrical lighting, et cetera.

However, if you look at this building, there is sprinklers, and there is smoke detectors. Smoke detectors and sprinklers provide a safety capability.

You don't have to have a fire for that capability to be there. Likewise, with a geological repository, when the NRC evaluates DOE's license application, there may be a 10,000 year package, and maybe it will last much longer.

There still has to be what will the geology provide in terms of safety if there are some releases from the waste package, and what the regulations require is there has to be a natural barrier, a geologic barrier, that provides a substantial capability to prevent or delay the movement of radionuclide.

COMMISSIONER HERRERA: And my final question is related to process, and I should have asked it earlier, but the gentleman spent a lot of time talking about the process, but I think this might

be relevant.

And I again refer you to Clark County's experience with EIS, and we provided what we think are meaningful comments to the EIS, and never, never to this day have we received a response regarding our comments to the EIS.

Now, because the application by DOE, if it comes to that point, then what kind of public involvement process will be involved at that point? Because the DOE essentially will prepare an application, and submit it to the NRC, and then obviously you will provide an opportunity for public comment.

But now what kind of assurance would be in that process to address the concerns that are identified by the public and not just cataloged and acknowledged that they have been received?

MR. CAMERON: Okay. Let's answer that question. Let me just get a quick -- we have two questions that we need to answer for you, Commissioner, and maybe the stability of the regulatory framework has been addressed, but we need to answer this question about the environmental impact statement and the public comment process.

Before we do that, Janet, did you want to

provide the Commissioner and everybody else with some background on the legislation?

DR. KOTRA: (Off microphone) My name is Janet Kotra, and I am on the staff of Waste Management, and am an author of the Nuclear Regulatory Commission Regulation for geologic disposal.

I wanted to correct some miscommunication. The Department of Energy never came to us and asked us to change the regulation. The Congress of the United States directed the Environmental Protection Agency to develop new regulations, and relying on the guidance of the National Academy of Sciences.

We were directed to form our regulations within a stated period of time to change what the Environmental Protection Agency initiated and went final on --

COMMISSIONER HERRERA: Well, was that because the DOE could not meet its initial standard that was established under the original policy act, or was it in response to just someone in Congress saying, oh, let's direct the EPA to work with the NRC and all the other regulatory bodies to amend?

If there wasn't a deficiency in the DOE's approach or their work, why would EPA have come before

you for an amendment of the process?

DR. KOTRA: I am not really qualified to address Congress' motive for what they did or didn't do, other than to say that the science with regard to evaluating the ultimate safety of the repository, and which our agency has been involved in for many years, and it has evolved a great deal since the concept was originally made in the late '70s of deep geologic disposal.

Science understands that those analyses have changed a great deal and there was a recognition that it is extremely difficult arbitrarily to set values for period of time facilities.

And that the new criteria that the Environmental Protection Agency developed recognized the evolution of that science, and began trying to comply with the direction of Congress, and with regard to the National Academy of Sciences.

I just wanted to clear up the fact that is how those rules got changed. The motivation behind the direction is open to multiple interpretations and analyses.

MR. CAMERON: Commissioner, let me get an answer to your question, and it will also address Dennis Bechtel's question about the environmental

impact statement, and I am going to go to Mitzi Young from our Office of General Counsel.

MS. YOUNG: (Off microphone) This may or may not answer your question. But one of the things that have come up in terms of the concern that I am able to understand from your commends is what guarantee or assurances is there as to the integrity of the process that the rules of the game aren't going to change, and I think that is how you phrased it.

COMMISSIONER HERRERA: Not exactly. My specific question is because the DOE, who prepared the application without the benefit of public input given historic context on this entire process, that the NRC would receive an application that is prepared by the Department of Energy.

Now, the NRC will have a public comment period during that time to review input. Now, when we provide our comments to EIS, there was a catalog of concerns, and an acknowledgement of concerns, but never a treatment of concerns, and that is a big difference.

Now, what in the process will ensure that the concerns of the public aren't just acknowledged and categorized, but actually addressed?

MS YOUNG: (Off microphone) The NRC does

not have a public comment period on the application (inaudible). The opportunity for public comment only comes during a formal hearing, and the NRC licensing process then is totally distinct from the public hearing process (inaudible).

In other words, they must docket the application, review your comments, and give us an opportunity for people to raise issues and concerns.

COMMISSIONER HERRERA: And that is exactly the point.

MS. YOUNG: But I am just saying there is a little bit of difference in that process. Now, with respect to an application -- well, if we define a position in some respect, and we have that regulation that has been longstanding since the '60s, and if the NRC staff identifies a deficiency in an application, and the licensee does not provide that information in a reasonable amount of time, we have the ability and the authority to issue a notice of denial of the application.

And that is in the regulations, 10 CFR 201.108. So that is one thing that we could do, is to deny the application because they did not provide the information requested in a reasonable amount of time for NRC review.

With respect to adoption in terms of the EIS, we have a very narrow role described by Congress that was on Slide 12, I think, and we have only addressed the adoption issues only in two limited issues. Whether there is a change that the NRC would take without significant environmental impact, or there is some change in the information about the product storage location, and somehow renders this EIS inadequate.

That does not to questions about whether in preparing the EIS that DOE followed all of those regulations necessary for preparing it. So those things don't even come under the NRC process.

COMMISSIONER HERRERA: At no point throughout the process has the county's or the State's comments to the DOE's environmental impact statement been addressed?

MS. YOUNG: I understand what you are saying, and in terms of the original Nuclear Waste Policy Act, that within 180 days of DOE issuing their final environmental impact statement (inaudible) -- are required to do.

Now, DOE on the other hand, could raise defenses and try to defeat those plans. The NRC is going to take the litigation on the EIS, at whatever

point it is that the DOE comes in for a license application, and right now that will happen in December of 2004.

COMMISSIONER HERRERA: Now, with respect to your comment about the lack of an opportunity for a public hearing as far as the application, is that a mandate from Congress or is that an NRC adopted regulation?

MS. YOUNG: There is not a lack of an opportunity for a public hearing on the application.

COMMISSIONER HERRERA: I thought I heard you say the public will have an opportunity to be part of the --

MS. YOUNG: No, what I tried to explain is that the NRC hearing is a formal adjuratory proceeding. When we notice the application and docketi it -- and that is a horrible word to use, at that point the staff attorneys for the application have all the information on the Yucca Mountain Review Plan.

And that is only a guidance document. For example, DOE could ignore the document entirely and say we are going to meet the regulations another way. That would put us in a bind in terms of using our resources for a review of it, because we went along

with the structure of the way that it was anticipated to be reviewed in the review plan.

But when we issue it in the Federal Register, and it is a notice to the world, that we have received an application there is an opportunity for any person in the United States, including Native American tribes, to file a petition to show status, and if they can show if they are affected by it, they automatically get to participate in the proceedings.

But those affected, such as the local governments, Clark County, Nye County (inaudible). Environmental organizations has a number of facilities that could be harmed by any activity associated with the reposed repository, would have an opportunity to come into an NRC hearing and if I have an interest that has been harmed, and I have an issue, and I want to litigate, and a 3-Judge panel would have to make that decision.

So it is a hearing, but it is not a meeting where people come and give comments and say it is a good idea or a bad idea.

COMMISSIONER HERRERA: Right, and I asked that because --

MS. YOUNG: And it is a hearing based on factual evidence, and based on people who have

knowledge about the facts, and experts who have opinions as to how the repository will operate over the long term.

COMMISSIONER HERRERA: And I asked the question the way I did was because the County, and everyone else for that matter, had an opportunity to provide comments to the EIS.

Now, the opportunity was to provide comments, and not to get those comments addressed, or dealt with in any significant way, and there is a substantial difference in having an opportunity to participate and having results based on the concerns that you have raised during that period of participation, and that's why I asked the question in the context of the EIS process.

MR. CAMERON: And I think that really restating your question for us, Commissioner, is -- and I don't know if there has been a decision made on this, but to the extent that the Department of Energy did not adequately address -- and let's not say accept, but did not adequately address the comments that Clark County or others gave on the draft EIS, is there some opportunity for Clark County to raise those issues again somehow with the Commission in connection with its process.

And I think that is what you are trying to find out, and I don't know if we have a good answer to that yet, because I think there are still some things that the Commission is considering.

But, Janet, do you want to say anything more on that specific issue, because I think that is the key, and I think that we really need to hear from a couple of other people here and move on to the next presentation.

But I want to make sure that the Commissioner and -- and by the way, Commissioner Herrera, you are the Chairman of the Clark County Commission for people who don't know.

MS. SCHLUETER: (Off microphone) Well, I think the bottom line is that we are required by Congress to adopt the environmental impact statement to the extent practical, and as was stated earlier today, there are one or two conditions that might exist where we could not do that.

And as part of the licensing process, we would expect that the Energy Department would provide official information beyond that which was covered in the final environmental impact statement, particularly if there were significant changes for other program changes with the repository, and were not covered in

the final environmental impact statement.

We are a commenting agency, and like you, we provided comments to the Energy Department. We did not receive, nor did we expect necessarily, a written response back from the Energy Department on those comments.

Despite that, as part of the licensing process, the Judge will have to determine the degree to which the final environmental impact statement adequately meets the (inaudible) consideration.

If it is determined that it does not, that will then (inaudible) for the Judge and the panel to render a decision on whether we should deny or grant the license.

MS. YOUNG: Unfortunately, that's not quite correct.

COMMISSIONER HERRERA: Okay. I will take your word for it, because I am not sure I understood what was said.

MS. YOUNG: Well, it is extremely complicated, and because the regulations have been very narrowly interpreted, it was Congress' intent that when one agency does an environmental impact statement, for the second agency that is relying on that statement to take an action, that it doesn't

necessarily retread entirely all the ground that the first agency did.

So the issue is -- your comments on the EIS had to do with things under those two standards where we couldn't make the adoption decision, definitely that could be a basis of a contention that would come into a hearing.

If it is something else, and if it is not significant new information that would render the statement inadequate, it doesn't (inaudible). That is the way the rules are written to day.

COMMISSIONER HERRERA: Okay. So today in the rules, there is no assurance that Clark County's concern that the EIS will be addressed out of a legal framework?

MS. YOUNG: Based on the general way you say your question, on the general information, unless it somehow fell under those two standards where the NRC's based its decision not to adopt the EIS, or let's say the NRC adopted 80 percent, and then 20 percent was left, and then your comments pertained to that 20 percent, that comment could be the basis of a contention regarding what the NRC is going to do with the 20 percent.

So if the NRC were to adopt the entire

document, there is on EIS issue in the sequence. If we don't adopt the document, then the NRC looks at the DOE to redo its statement, and then a lot of issues would come in.

But right now the way it is structured, it is on very limited, and unless Clark County's comments pertained to those two standards for adoption, it is not litigated in the NRC.

MR. CAMERON: I think the answer is yes probably.

COMMISSIONER HERRERA: Let me close by saying thank you for your indulgence, and thank you for the indulgence of the folks who are in the audience, and the answer that we received underline why Clark County residents are so concerned about Yucca Mountain as a repository.

There is a lot of questions that remain unanswered, and there is a lot of uncertainty to the process that remain unanswered, and nowhere, nowhere did I hear in any of those answers that the residents of Clark County and their concerns will be adequately addressed at any point in the process. Thank you very much for your indulgence.

MR. CAMERON: Okay. Thank you, Commissioner, and let's go to -- we really need to get

on to the next section, and so I am just going to ask for these questions to be real quick. Kalynda, go ahead.

MS. TILGES: I wanted to thank you for allowing our Commissioner, and giving him the time to make his questions and to answer them. I think that when you have called a public hearing and you ask for comments and questions that you should give everyone time to make them.

MR. CAMERON: Absolutely.

MS. TILGES: And it looks like DOE has you all over a barrel, too, huh? But I did want to say, and following up on what Judy's statement is, that with worst-case scenarios, we live here, and we want worst-case scenarios.

And 9/11 was a worst-case scenario, and if we had talked to you and the DOE about that on September 10th, we would have been discredited. But it happened. Worst-case scenarios do happen, and we want to know what they are.

Also, going over worst case scenarios may bring up other issues that you haven't thought of before. I don't normally like to quote television programs, but anyone who watched the West Wing, Martin Sheen's last comment is, is we spent all this money

and we do all these studies, paraphrasing of course, and then we can't protect ourselves against the thing that we haven't thought of.

So the worst-case scenarios may bring up the things that we haven't thought of. Secondly, I would like to know if you plan on testing, full-scale testing, to destruction the transportation casks, and the waste storage casks that will be placed in the mountain?

MR. CAMERON: Okay. I think we heard your comment, Kalynda, on worst-case and the reason for doing that. Let's just briefly address that cask issue and move to Abbie and Dennis, and then we have to go to Tim McCartin, because this is an extremely important part of the repository protection process. So, Chet.

MR. POSLUSNY: Chet Poslusny, Spent Fuel Office. Our office is sponsoring a risk study, both package and performance study, started in '99 and expected to continue until 2005, and which includes testing of casks beyond current regulations.

We are considering doing a full scale test, not to destruction, but full-scale testing. We are planning to have a meeting for public input on that plan itself in August, probably around the middle

of August, in Vegas. So we will look forward to consulting with you on that topic.

MR. CAMERON: Okay. Thank you. Thank you, Chet. Abbie Johnson.

MS. JOHNSON: My name is Abby Johnson, and I am the Nuclear Waste Advisor for Eureka County, Nevada, and I live in Carson City, and I have a 6:30 plane, and given the new travel things between Las Vegas and Southwest, I have to leave pretty soon.

So I just want to say my peace, and try to make it more comments than questions to speed it up a little bit. First of all, it is a kind of confusing agenda where there is lots of times for questions, and no time for comments. So I am going to make some comments, and they might be out of order, but here I am.

The first one is I did find a copy of the Yucca Mountain Review Plan and looked in the glossary for the word safety, and I didn't find it. I heard safety about 250 times in the past two hours.

I remember when DOE's Carl Gertz came to Reno and said if it is not safe, we won't build it, and at first we actually believed him. And then over the years we came to realize that safety meant license ability, and so I think it is really important for the

public to be able to read what the NRC considers to be the definition of safety.

It is almost as common as the word is or the, and yet I really can't tell you what is safe and what is not, but I can tell you that my version of safe is different than your version of safe, which leads me to my often-repeated joke of if an earthquake happened tomorrow, DOE would say, well, we got our 10,000 year event out of the way, and let's move on, along with what Kalynda said.

Secondly, apparently DOE has something called a pre-closure safety analysis guide, which is kind of like this Yucca Mountain Review Plan, and if I am reading the minutes of the meeting that you guys had a few weeks ago correctly.

I don't want an answer now, but at some point I would like to understand the relationship between DOE's guide and this guide, and if DOE is changing its guide to reflect what is in your draft guide, or are you kind of trying to read their guide and figure out what should be in your guide.

The third thing is in the past week or so Secretary Abraham has made some sweeping statements that 77,000 metric tons is just the beginning, and that he feels that Yucca Mountain can probably

contain, and as scientists say, that Yucca Mountain can contain 120,000 metric tons.

I see that you have a definition of repository footprints in the glossary, and I am wondering if that footprint is kind of like my 14 year old son's feet; it just keeps growing.

What I really want to know is how will the NRC deal with the ever-growing footprint through the licensing? You know, DOE has not told us if it is a hot repository or a cold repository. That makes a big difference in terms of the size of the footprint.

And then here they go again saying, oh, we can stuff more waste in there, and there is enough room for everything. Well, we are hearing that, and frankly, it is our land, and we want to know how you can handle an issue like that which seems concomitantly unfair, and putting unfairness on top of unfairness.

I am sure -- and I am not sure if there is time for an answer right now, but it is something that I would like to understand how the NRC is going to deal with the licensing, especially if in the middle of the license procedure DOE comes to you and says, well, guess what, we want more space. How does that work? Thank you.

MR. CAMERON: Thank you, Abby. Can we address the -- do we have anything to say about the repository, the growing repository footprint issue? I think Janet Kotra had something on that. Janet.

DR. KOTRA: (Off microphone) Very briefly, the law currently limits the capacity to the 70,000 metric tons. If DOE wanted to increase that, it would take an act of Congress as I understand the law right now.

But I think it is also important to realize that that limit set by Congress was not a technical or safety limit. The Nuclear Regulatory Commission in evaluating a license application could make a determination, for example, that only 40,000 could safely be placed in the mountain.

And if that were the case, then that would determine it. So it is an upper limit right now that would have to be changed by Congress. If Congress changed the law with regard to that, then the NRC would have to certainly take that into consideration if an application came in for a larger quantity.

But there is no requirement that we would grant either the existing upper limit if it did not demonstrate to meet safety requirements.

MR. CAMERON: Okay. Thank you. And we

are going to go Dennis, and then this gentleman, and then we have to move on. Abby.

MS. JOHNSON: Chip, I was just going to say that I look forward to the day that if we have to take this thing and the NRC says you can only fit 40,000 metric tons in Yucca Mountain, and you guys could stand firm on that, and not be overridden by politics. But I am still pretty skeptical about that.

MR. CAMERON: We understand that, Abby. Dennis, and then this gentleman, and then we will ask Pat to sit down and then have Tim. Dennis.

MR. BECHTEL: Yes. I am not sure that you totally answered the question about regulatory stability, but I think part of the concern that the public has and Clark County is with the suitability guidelines that were modified well into the process, and as I understand it to look at more of a systems approach.

But nonetheless your concern is out there, and I think the Commissioner expressed it well, that shifting gears again could conceivably happen, and that is a concern of the public of Clark County.

MR. CAMERON: Thank you, Dennis. Yes, sir, and if you could just tell us who you are.

MR. LEVINE: Sure. Eric Levine, KLAS,

Channel 8 television, Henderson, and I am a resident. My question is simply this. I am not a scientist, but I just wondered if you guys who work for the Nuclear Regulatory Commission, where do you all live? Just a quick question.

MR. CAMERON: All of us live in the Washington, D.C. area, except Bob Latta, who is right here, who is our on-site representative, and we can provide you more information about what they do.

MR. LEVINE: Can I ask my question?

MR. CAMERON: Go ahead.

MR. LEVINE: Thank you. Simply put, I was just wondering that if this stuff were to get out of a canister on your front lawn from any of these hundred-and-some-odd reactors, whether it is a fire, a terrorist attack, whether they forget to put a lid on it, what if an -- I don't know -- accident happened -- and there have been predicted accidents over 40 years -- could you walk up to it?

Could you touch it? Would it kill you? Would it get in your lungs? I mean, is it a risk to your health, your kids' health? With your house, would it ruin the resale value of the property?

What physical and financial, and detrimental, and psychological, and whatever risk it

poses, whether it be here, or in your community of D.C., or wherever, what risks would it pose, if any?

I know that you have great safety procedures, but I am wondering about the risk of what you are transporting.

MR. CAMERON: That is a good bottom-line question. Who wants to address that?

MS. SCHLUETER: Well, I think there is actually two pieces at the end of the that with the transporting element, which we could speak to as far as the safety record of the transportation of spent nuclear fuel in this country to date, and I will let Chet do that from our transportation group.

First though with regard to the environmental standards that you mentioned. We have rules in place which are consistent with the Environmental Protection Agency's standards that require that the potential site that is licensed would have to adhere to, and that applies to the individual limit for a member of the public that you could receive a certain dose, and that dose is 15 millirems per year to an individual.

And there is also a separate standard that applies to ground water pathway, and that is 4 millirems per year. These standards are extremely

conservative. They are also a fraction of the public dose limit which is allowed for other operations in the United States from a variety of facilities.

They are also consistent with and even lower than some international recommendations by bodies, and organizations, and scientific groups. So we believe that they are conservative, and adequately conservative to protect the citizens and their ground water source as well, as well as the environment.

MR. LEVINE: I'm sorry, but my question is the materials. Would you touch it on your front lawn if it broke out of a canister, and would something happen to you? How deadly is this? I don't know and I am asking you. I really truly don't know.

MS. SCHLUETER: Well, certainly spent nuclear fuel needs to be adequately stored, and transported, and -- well, do you mean can I touch it? No, I would not touch spent nuclear fuel.

MR. LEVINE: Well, would you be evacuated if you touched it?

MR. CAMERON: Excuse me, Eric, but we have got to get this on the transcript, and I know that it is an important issue. What are the consequences in terms of the repository if anything happened to misfire, and I think that is the question, okay?

And obviously if it is on someone's front lawn, we don't want it to be on anybody's front lawn. But if you could give an answer with what the dose standard is, and maybe comparisons.

I mean, if we could try to help Eric understand this better.

MR. LEVINE: That is not the question. I am talking about --

MR. CAMERON: Well, what I am asking if there is anything else that Janet, after hearing Eric's concerns, if there is anything else that Janet can provide on that that would give him an idea of what the hazards are.

MS. SCHLUETER: Well, the dose limits that I mentioned, one comparison that I could give is that the 15 millirem per year could be compared to a transcontinental airline flight.

MS. TREICHEL: What is that problem compared to spent fuel here?

MR. CAMERON: Would you please let her try to answer the question.

MS. SCHLUETER: For example, it has been measured that a typical transcontinental flight would result in 5 to 10 millirems to an individual in the air.

The standard applicable to Yucca Mountain is 15 millirems, and so very comparable, a very comparable millirem exposure.

MR. CAMERON: And let me just see if Janet has anything to add to that.

DR. KOTRA: (Off microphone) She answered your question and that the stuff is very dangerous, and the reason that the NRC has regulatory responsibility and is so concerned about the appropriateness of the standard as Janet has mentioned is the fact that the public, and the workers who handle the material have to be protected.

This is a very serious job, and we take it very seriously. This is dangerous material, and that is why it needs to be handled properly and when it is stored on site, and when it is transported, and when it is disposed.

What Janet attempted to tell you is that we are very cognizant of the importance of setting and enforcing very stringent standards for protection from this material wherever it is.

MR. CAMERON: Okay. Eric, I think maybe that did it.

MR. POSLUSNY: If I may?

MR. CAMERON: All right. Chet. Go ahead.

MR. POSLUSNY: Briefly, there have been about 1,300 shipments of spent nuclear fuel over the past 20 years, and in casts that have been approved by the NRC, and there have been more in casts that the DOE has shipped, and obviously more overseas. But there have been no serious accidents in any of those shipments.

We understand that there will be a large number of shipments if the repository is approved. We are concerned about security as well. We are looking at our regulations right now and we are doing vulnerability studies for both storage casks and transportation casks. One study will be done by December of this year and another one a year later.

And the results of those analyses may require new designs, or changes in the design requirements, as well as changes in the security requirements. In fact, we have approached additional security requirements at all sites with spent nuclear fuel in the U.S.

That is being done through an advisory, and also it is being worked on as an order as we speak. So these items are important, and obviously September 11th has been a lesson, and we are committed to safety.

MR. CAMERON: Okay. I think we really.

MR. DANIELS: Can I ask a question?

MR. CAMERON: Yes.

MR. DANIELS: I am Dennis Daniels and I am speaking for myself. You said there has been no serious cast accidents. Have there been any?

MR. POSLUSNY: There have been -- considering the casks, there have been less than a dozen accidents, or less than 10 actually, over the past 20 years.

One accident occurred in 1971, I believe. A cask was thrown about a hundred feet off of a truck. And it received only surface damage, and there was no radiation release.

MR. CAMERON: You know, we can't go on with the transportation thing, but Andy, I will let you go one quick question, and then we have to get on.

MR. HERESZ: Just a real quickly. If these casts are so safe, what do we need Yucca Mountain for?

MR. CAMERON: This is one piece that they have to hear, and this is an important piece, and Tim McCartin is going to talk about it, in terms of long term repository requirements.

I know that we are over time and maybe we

are not over time yet, but I know we are late, and we have other presentations. This one we really want you to hear, and I think we are going to try to encapsulate the next two very quickly. Tim.

MR. MCCARTIN: Tim McCartin, and I an am employee at the Nuclear Regulatory Commission. As Chip indicated, I will be talking about the long term safety, and that is that period of time after waste is in place in a potential repository at Yucca Mountain.

My safety I mean that the future behavior of the potential repository would be within the safety standards and requirements of the Environmental Protection Agency and the Nuclear Regulatory Commission.

My talk today, I really want to focus on three particular topics. First, I would like to describe briefly the safety requirements that the repository must behave to.

Secondly, the requirements on how DOE is to evaluate the safety of a repository, and third how the NRC would review DOE's evaluation of safety. And with that, the requirements for long term safety, there is a requirement for individual protection, a ground water protection standard.

There also is a standard to judge the

safety of the repository if there was an accidental drilling through the repository. Someone could potentially drill through the repository inadvertently sometime in the future, and we call that the human intrusion standard.

All three of those have numerical values to them as we discussed a little bit earlier with respect to the multiple barrier requirement, which is the fourth requirement for the repository.

The repository, as I explained briefly before, must have both natural and engineered barriers, and I will explain that in a little more detail.

For multiple barriers, when I speak of an engineered barrier, we are talking about a safety function of the repository that is man-made. Examples of that would be the waste package, and the drip shield.

The drip shield is a metal tent that is over the waste package, and it prevents drips from falling directly on to the waste package. It shields the waste package from dripping water. That is why it is called a drip shield.

In terms of the site, the natural barriers, the site geology also has to provide some

safety function. The waste is buried below a few hundred or hundreds of feet, or almost a thousand feet of rock that provides protection from individuals coming into direct contact with the waste, and sort of -- a brief example would be if it is on my front lawn.

Well, it is buried a thousand feet below the surface, and it is not going to get on someone's front lawn Likewise, the potential eventually is that there could be some releases from the release package. Those releases would have to go through those rock layers.

There is thousands of feet of rock that the waste would have to travel through very slowly before it could get to a point where there could be a potential source of contact with human beings.

Those really are the requirements for the repository. The next question is how is DOE going to evaluate the repository. DOE is required to do a systematic and thorough analysis of the repository.

The regulations, both EPA's and NRC's regulations, refers to a performance assessment as that systematic analysis. And as Pat Mackin described earlier during operations, this kind of analysis also addresses the same three kinds of questions.

And they are what can happen, and what could happen, and how likely is -- Janet, could you put up those slides. And what could go wrong, and how likely it is, and what are the consequences if it happens.

Those are the same three kinds of questions. I would like to describe the performance assessment, the requirements on the department in doing this evaluation with respect to these three questions.

In terms of what could go wrong, once again, we need the department -- Pat is required to do a very thorough analysis. You will see in the regulations and in the Yucca Mountain Review Plan that we have identified three categories to ensure that the department does a thorough analysis.

We speak of features, events, and processes. Features are the kinds of things that we could go out and see and measure, like a fall, or a large crack in the rock. How wide is that crack, and how long is that crack. It is a feature.

Events are the types of things -- something that might happen at a particular time, such as earthquakes, volcanoes occurring, at particular times.

Thirdly, in contrast to an event that happens at a particular time, we speak of processes, which are things that occur gradually over long time periods, such as the dripping of water into the repository, corrosion of the waste packages, or processes.

All of those -- the features, events, and processes -- will affect the performance of the safety functions of the repository, the barriers, and we would expect DOE, in terms of looking at what could go wrong, a comprehensive list of those kinds of things that will affect the safety performance of the repository or the barriers.

Secondly, having identified what can go wrong, the next question is, well, how likely is it to go wrong. And there is really three aspects to looking at how likely something is, and the probability that something might occur, and how often it might occur.

Next, related to the probability is the extent, and how big or how large that particular event you are looking at. For example, earthquakes. Very small earthquakes occur very frequently. Larger earthquakes occur less frequently.

And so when you are looking at that

probability, you also have to consider how big the event is, and secondly, the location. Where something happens certainly will have an effect on the performance of the repository.

An example is the dripping. Are we getting dripping water on all the waste packages or a very few? There is a certain likelihood about how many packages might experience drip. Having identified what can go wrong, and how likely it is, the final question is, well, what are the consequences when these kinds of things happen.

The Department of Energy, in their performance assessment, this systematic analysis, is required to look at the safety during normal conditions. When the barriers are behaving as expected, and the safety features are functioning as expected.

Second, when we have all those features, events, and processes we have examined identified, what is the safety during what we at the NRC have sometimes referred to as disruptive conditions, such as the potential for a volcano, increases in rain fall, will and have the potential to affect once again those safety functions.

And in the analysis of the consequences

the department would be looking also at the effect on the functions of each of the barriers. That is the analysis that the Department of Energy is required to do, this performance assessment.

This sets the context, and there are safety requirements, and the evaluation of safety for my third topic, which is, well, how will the NRC review DOE's safety evaluation.

And there are a number of things that we consider and that you will see in the review plan. First, the purpose of the barriers. We will look at what DOE -- what they are relying on for safety, and what are the safety functions that they have identified that ensure that the safety of the repository will occur for out into the future.

Next, we will look at their features, events, and processes. They have identified what can go wrong, and we will look at their identification to see that it is a complete list.

Next, the likelihood and certainly well beyond, we will look at the consequences, and how they evaluate the consequences of when these things go wrong.

We are estimating the future behavior. So evaluating those consequences relies on scientific

models, computer models, to estimate what the future behavior of the repository, the functioning of the barriers, et cetera.

That has to do with what is the scientific information supporting that evaluation that the Department has presented, and you will see in a review plan that a large portion of that for this evaluation, there is 14 large topic areas related to the heat of the waste, volcanoes, earthquakes, corrosion of the waste package.

And there is a lot of information that the NRC needs to evaluate in terms of what, how, they have supported the performance assessment. And I guess I would like to respond very quickly to Dennis Bechtel's comment about scientific precision.

And it is a good comment that I will say that this document, the review plan, is written for the NRC staff. And there are times when we write things that we don't write for people on our floor and our ability, and we don't think of other interpretations of words.

And I will say that scientific precision is one of those terms that we know what we mean. We are talking to ourselves, and it is not very clear to other people, and I think that is a good comment. I

think we need to go back to the document and look for certain terms and clarify those things.

What is meant by scientific precision? What we intended, and I don't know exactly what sentence, but I have in my mind where it might occur, but what we had intended by that, we are not interested to a very precise answer because it might be the answer to the wrong model.

You might, for example, say that the waste package is going to corrode after 25,000 years, 300 days, 12 hours, 15 minutes, and 5 seconds. That is a very precise answer, and that is not what we were trying to get.

We don't want a precise answer. What the department needs to do, and what our review gets into, is that when you look at scientific information, this is a very complex subject. Estimating out to the future is very difficult.

There are going to be scientific differences between different scientists. The Department is required to evaluate these differences, and we will look into how they document these differences.

In our regulation, we use a word alternative box. That is part of looking at the

differences, and rather than giving a very precise answer that could be wrong, as I indicated, we would rather see what requires the department to evaluate this scientific uncertainty, these differences of opinion, and the waste package we estimated to survive somewhere, let's say, somewhere between 5,000 years and 25,000 years.

It is not very precise, but the information is uncertain. The scientific information and that range of the lifetime of the waste package is supportable, and that is what we were trying to get at with the scientific precision. It's not that we don't want a defendable calculation, but we were trying to get to that point, and I realize that we need to be a little more careful.

And there are probably other terms in there that are not -- that people outside of our floor, people will get the wrong impression. With that, I would like to turn to a brief example. What are the kinds of things that we would look at when we are reviewing these things.

If you look at the review plan, you will see a lot of discussion of geology, of corrosion science, et cetera. But for one example, when we look at dripping water, there are a number of things that

the department of energy will present in its license application.

First, they are currently doing testing and do measuring to estimate what that dripping is. We will certainly look at the experiments, and the measurements that they made, and how it relates to estimating what dripping could be.

Second, future climate changes. This gets into the features, events, and processes. Over time, rainfall could increase, and climate changes, and how will that affect dripping, and that is another aspect that you will see in the review plan.

The heat from the waste, and the waste going in is fairly hot. It will warm up the rock and the water. The properties of the rock will change, and the properties of the water, and obviously some of the water will boil away.

All of that will have some potential effect on dripping. That also needs to be evaluated. And lastly as someone brought up, the drifts, the tunnels. Right now if you go into the tunnel at Yucca Mountain, it is relatively smooth, and relatively uniform.

Maybe dripping will drip off to the side, et cetera, but with time that tunnel -- rocks will

fall, and there could be some collapse. It would be this smooth tunnel. There will be holes, cragidy things, et cetera.

The long term changes in the tunnel, how will that affect the drip, and you will see those kinds of topics in our review plan. These are the kinds of things we need to look at, and how the DOE has addressed them.

With that, I would like to just close with a brief summary, in terms of that long term safety depends on both the site and the man-made barriers, and it also requires a thorough performance assessment, and this performance assessment needs to be supported by sound scientific information.

And those are the kinds of things we will review. Thank you.

MR. CAMERON: Thank you, Tim, and also for some real world examples. Yes, sir?

MR. JACKSON: Hi, my name is Hugh Jackson, and I work for Public Citizen, a public interest organization out of Washington, although I have been in Henderson, and sitting patiently and listening, and you finally got to performance assessments.

And so I thought that this would be a good time as any to get up and say that I share the

comments made earlier about the awkwardness of the format here, requiring questions, as opposed to comments, and so I hope that you will allow me to provide some preparatory remarks before I get to performance assessments specifically.

And I have been crossing things out, and so I will try to be short. Energy Secretary Spencer Abraham has argued, and a lot of people in Congress were arguing as well on the floor of the House when it was debated there, is that all we need to do is move this long to the next stage of the process.

That a vote for Yucca Mountain, or a veto rather, isn't a vote to start shipping this stuff tomorrow. It is merely a vote to let the NRC take up licensing and go to -- I believe Abraham's words were the neutral and objective NRC.

That you is an abrogation of responsible leadership, and it is founded on false premise. The NRC justifies some of its most important programs from reactor licensing, which is going on at a break neck pace, even after September 11th, to power plant uprates, which is letting power plants run hotter and longer between scheduled shutdowns, and even to reactor design certifications for new reactors by entrusting the NRC's regulation-encoded belief that

waste will be shipped to Yucca Mountain, and I am referring, of course, to the waste confidence rule.

The NRC has a massive and insurmountable conflict of interest that precludes an objective assessment of the license application. The commission is bias in favor of the project, and is found in the Yucca Mountain licensing rule itself, and under which it has been noted, and site suitability can be considered, and safety and feasibility of transporting waste is not considered.

In the NRC's conflict of interest, predisposition of the Yucca Mountain license application being approved favorably is certainly on display in this plan.

Specifically with regards to the performance assessment, where the spirit of complicity is certainly on display. The NRC advisory committee on nuclear waste, which I know you have addressed, has repeatedly criticized the DOE's methods of assessing performance.

Specifically, the committee has expressed a lack of confidence in the DOE's modeling process, and the DOE's liberal use of "conservative" assumptions, and this was also a phrase that Mr. Mackin brought up earlier.

And using those assumptions in lieu of realistic evidence. In a September 28th comment to NRC Chairman Richard Meserve, the advisory committee warned that "the inconsistent use of conservatism" throughout the DOE's models "makes it difficult to identify the issues that are important to risk and precludes a risk-informed analysis of the proposed repository on the basis of evidence."

I will move along here. In a subsequent letter to, George Hornberger, who is the chairman of the advisory committee on nuclear waste wrote in a subsequent letter to Meserve that absent a realistic evidence and science-based analysis, and inferring that is not what the DOE has done, the question of how safe is the repository is unanswerable.

In the DOE's performance assessment, "the spirit of calculating the real risk was not evident."

Now, conveniently for the DOE, it doesn't have to calculate the real risk. Realistic risk analysis isn't a priority in this review plan either.

The plan instead allows DOE to base its license application on the same heavily criticized conservative assumption-based performance assessment that the DOE relied on in the site recommendation.

Particularly in Section 4, the plan itself

says that in many regulatory applications, a conservative approach can be used to decrease the need to collect additional information, or to justify a simplified modeling approach.

Conservative estimates for the dose to reasonably and maximally expose an individual may be used to demonstrate that the proposed repository needs NRC's regs, et cetera, blah, blah, blah.

The NRC appears to have either missed the point of the advisory committee, or is willfully ignoring it. Just because the NRC says estimates "may be used to demonstrate the dump safety does not mean that those estimates realistically demonstrate anything of the sort."

And the NRC gall is unmitigated. The agency openly declares that it hopes to "decrease the need to collect additional information." Now, somebody earlier brought up the General Accounting Office, and the report that showed that it had 293 unanswered questions.

And if anybody knows that the DOE is years away from having the information that would be ready to approve an acceptable license application is the NRC.

Instead, the NRC has allowed the DOE to

hide real risk behind these models and these abstractions, while at the same time putting its own bias on full display. The skids are greased, and no matter how incomplete or riddled with inconsistencies, make no mistake, the NRC will absolutely, positively, accept DOE's license application, and I hope that everyone here understands that.

And if that same lack of objectivity continues to hold sway within the NRC, that no matter what the real risk to the public posed by the Yucca Mountain Nuclear Waste Repository, the NRC will ultimately approve DOE's license.

Citizens place trust in public institutions such as the NRC to protect public health and safety. The NRC's complicity with DOE is an affront to that trust, and an affront that is doubly primacies, because as I mentioned earlier, politicians are using the myth of NRC objectivity to rationale their support for the Yucca Mountain project.

I mentioned earlier the waste competence decision of the NRC's conflict of interest regarding this plan and this project, and this whole nuclear waste fiasco.

In that waste confidence decision, the NRC states that it believes that Yucca Mountain will be

built, and accordingly, no discussion of nuclear waste is required in connection with issuing a new reactor license or amending an existing one.

So as they go along relicensing all of these old reactors all across the country, or to use this is terms of power uprates as well, and letting reactors run longer and hotter, the first question a reasonable person asks is, well, what are you going to do with this waste.

And the NRC's answer is, oh, well, you can't ask that question because we have a waste confidence decision that says we are pretty sure that Yucca Mountain will be built.

The NRC has even extended that logic to proceedings on certifying the designs of new reactors as part of the Bush administration's obsession with creating new nuclear power plants.

Many of the most significant decisions made by the NRC effectively result in a creation of more high level nuclear wastes, and each and every one of those decisions refers to the NRC's belief that waste will be shipped to Yucca Mountain.

The NRC is incapable of analyzing the DOE license application objectively, because the NRC has too much riding on Yucca Mountain. When the NRC

ultimately decides that nuclear waste should be shipped to Yucca mountain, it already has. Thank you.

MR. CAMERON: Thank you for those comments and opinions, including the specific ones on performance assessment, and I guess I just wanted to clarify one thing in case there was any misunderstanding, is that we really do want to hear comments such as that.

This is not just a question session, but we just have the format so that we can try and have comments and questions on these topics after they are done. But thank you for your comments.

I guess I would ask -- I was going to say that pretty soon we will be ready to start tomorrow night's meeting, but I do want to have the security and the performance, and the monitoring, to have that information for you.

We are going to try to encapsulate it and make it quick, but does anybody have a question for Tim on -- well, any further questions or comments for Tim on the performance assessment issue?

MR. MCCARTIN: Well, Chip, if I could just respond to just one quick item.

MR. CAMERON: Sure, go ahead.

MR. MCCARTIN: We heard what our advisory

committee said. They are worried about the use of conservatism that may be masking certain things, and they would like to see a more realistic calculation.

You will see in the review plan that if the Department uses conservatism that there is a justification, and that indeed by conservatism they are saying that we will use this assumption because we have strong evidence that if we use it, we will not be under-estimating what the dose could be.

And an example that I would give you is maybe they assume that all the waste packages are dripped on, rather than trying to develop a model for where things drip.

Well, if I have all of them getting wet, that is conservative. So I am not under-estimating the dose. So whatever calculation they are doing is larger than we would expect.

The actual performance would be better, and that is what the advisory committee was getting at. They felt that the DOE analyses -- actually the performance of the repository was much better than they were presenting, and they want to see them doing a more realistic analysis.

But the NRC regulations, we have the standards for safety, and if you can meet those

standards with a conservative analysis, then the actual performance will be even better than that. So in terms of granting a license that would be okay.

MR. CAMERON: Well, just a little bit of an explanation on that. Thank you. Dennis.

MR. BECHTEL: Dennis Bechtel again. And this goes to Tim or others, but in your review will you -- is this just an internal review, or will you be using outside people as well? It is just curiosity how you -- well, I mean, right now.

MR. MCCARTIN: We have the Center for Nuclear Waste Regulatory Analyses, and the NRC staff, and combined, I will say -- well, if I throw in the Division of Waste Management in the NRC staff, that is approximately a hundred individuals.

However, the Commission has many other experts, and there could be material experts in the Office of Research, hydrologists, geologists, that the Commission could call on if needed, and additionally the Commission certainly can hire consultants.

But the one caveat for us and why we have the Center is that we would not hire any consultant that had done previous work for the Department of Energy, a conceived conflict of interest. But we hire consultants from around the world, et cetera.

MR. BECHTEL: Okay. Well, your statement mentions (inaudible).

MR. MCCARTIN: And we certainly follow not only what the Department does, but we follow what the State of Nevada's comments are, and the TRB's comments. We are aware of the other issues being raised, and so we follow those.

MR. BECHTEL: The other part is just this expert elicitation issue. If given the fact that you are probably are not going to have all the data that in the best of all possible worlds that you would actually like to have, and there has been some expert elicitation annals and things, where does that fit in the review, or is that --

MR. MCCARTIN: Well, there is very specific guidance on how to conduct an expert elicitation for people. It is areas where possibly there is no easily measurable data, and you need to do an elicitation, a questioning of experts.

And you get a panel of experts together to try to come up with what seems to be a reasonable representation.

MR. BECHTEL: Well, would you do that, or --

MR. MCCARTIN: Well, the Department of

Energy would or could conduct an expert elicitation. They would need to do it according to our guidance. We would certainly review how the elicitation was done, et cetera.

MR. CAMERON: Okay. Thank you. And thank you, Tim. Calvin, you had one question? Maybe the expert elicitation struck something in Calvin's mind.

MR. MEYERS: Calvin Meyers. I have been sitting here listening to you when you talk about the engineered barriers, and I have been to a lot of DOE meetings, and people see me a lot of places, and I am not the brightest person in the world, and I am not the stupidest.

But when I ask people about what happens if -- and we are talking about barriers, but what happens if the mountain itself cannot do what it is supposed to? The comment that I have always received was, well, we will engineer around it, which makes no sense to me.

And to sit here listening -- and like I said, I am not the brightest person, but it sounds like this is not science, but this is guesstimation.

MR. CAMERON: Well, I think you can see both parts of Calvin's question there, and if you could address those?

MR. MCCARTIN: Certainly. I believe the regulations do not allow you to engineer around the bad side. The requirement is for natural and engineered barriers, and there has to be a capability for the natural barriers, the geology of the site, to assist in ensuring safety.

I realize that DOE has a design that has pushed the releases from the waste package currently beyond 10,000 years. That does not reduce or diminish the requirement that there has to be a capability for the natural system.

MR. MEYERS: I know what it says. I am just telling you what DOE's comments to me are. I know that the mountain is supposed to hold -- well, what the requirement there is, and though it is not a complete barrier, but they seem to think that they can engineer around anything, around whatever happens, and they can engineer around it.

And I know that's wrong, and so when I come here to listen to you guys say that it is not supposed to be the complete answer, because every time they tell me that they will engineer around it, then why not go somewhere else, and they don't need to come out here to the west. Put it where it is at.

If it is that safe, and they can engineer

around that much, they can leave it where it is at, and that is my comment. And I just wanted to make a comment that I self-taught myself about what this Yucca Mountain stuff is, and when you guys talk, in all the game-playing that you guys do, I see right through you guys, and I think everybody else here does, too.

So you are not fooling anybody. You may think you are, and you don't answer questions, or you bounce around or dance around an answer, why get up and say anything? Just sit down and say nothing, and that would take less of our time, and we would still get the point. That's all I just wanted to say.

MR. CAMERON: Okay, Calvin. Thank you, Tim. We are going to have Jeff talk about security real quickly, and then I am going to ask Pat Mackin to come up and talk about the repository monitoring, and we will open it up for questions on that.

And I also want to introduce Bob Latta again before we stop for the afternoon.

MR. CIOCCO: Okay. Thanks. I am going to give you an overview about security from theft and sabotage that is located in Chapter 3. The two programs are in Section 3.3, the physical protection program, and Section 3.4, the material control and

accounting program.

Both of these programs must be described in detail to the NRC to give us a high level of confidence that the site would be safe. The physical protection plan -- I am going to tell you that the review plan sets up a protection goal which DOE must establish and maintain a physical protection system to assure that the waste operations are not harmful to our national defense and security, and that it does not pose an unacceptable risk to public health.

That said, there are certain capabilities in the regulations, and in the Yucca Mountain Review Plan, and the elements of the physical protection system include the security organization, physical barriers, entry controls, recording events to the event, and a response plan.

The response plan, very specifically, identifies regulations, and they are called safeguard contingency plans, and that is to identify all of the what-if's. What are some of the perceived dangers at the sites, and how would they be recognized, and what kind of response would they have.

The second element is that since 9-11, as was mentioned earlier I think by Chip, the NRC has done a top to bottom review of all the physical

protection at our licensees, including the potential Yucca Mountain site.

Once all the data is examined, and any final decisions are made, we will go back and revise the Yucca Mountain Review plan to comply with any physical protection requirements.

The other program in Chapter 3 is the material control and accounting program, and the purpose of that is to protect against an attack, and to respond to the theft or loss of nuclear material on site.

The elements of the program include material balance which must account for nuclear materials that the DOE would be authorized to possess by the NRC.

There must be physical inventories, and there is record keeping, and there is controls on the transfer of nuclear materials at the site. Both of these plans are for the on-site operations of Yucca Mountain and not regarding the transportation.

Now, these are two programs that must be included in the license application, and they must be well-written, and they must be approved by the NRC before they are implemented, and will be very detailed inspection programs for both the physical protection

and the materials control and accounting programs. That is an overview of Security from Theft or Sabotage.

MR. CAMERON: And I don't have -- we are going to have Ted Mackin come up, and I am not trying to cut off any discussion, but we will try to have one package here, and then go to you for questions. Pat.

MR. MACKIN: The Department of Energy has to demonstrate that it has ways in place to guarantee what it said was going to be safe continues to be safe throughout the lifetime of a repository.

And there are basically three programs involved in that, and the first of those is a requirement for a performance confirmation program that is required by the regulations, and it is the set of continuous or periodic monitoring, measuring, of the properties of the geology and the waste packages, and the other design components, to give confidence that things are operating as DOE said they would operate.

So that is a program of performance confirmation that is required. The second one acknowledges that although will not grant a license for Yucca Mountain unless convinced that it is safe, it acknowledges that in a complex system unexpected

questions can come up during the lifetime of a repository.

So the regulations require that DOE have in place a program that identifies these questions, and sets up programs to resolve them and answer them, and that the NRC examines those are necessary, and curtails or stops operations at the repository while they are being resolved.

And lastly accuracy and reliability of information really talks about a quality assurance program in some way so that we all can have confidence that the information that the DOE is gathering, and the way it is operating, and the qualifications of its personnel, the accuracy of its analyses, can be relied upon.

So these three aspects of a continuous monitoring program are required to be demonstrated by the DOE in its license application, and the Yucca Mountain Review Plan provides guidance to the staff on how to evaluate them.

MR. CAMERON: All right. Thank you, Pat, for doing a good job of condensing that, and I would just ask if there are questions or comments?

MR. KELMAN: First of all, i would like to comment and say that everybody here seemed to believe

that this is a unique project, and that the NRC must now look at this process as they have said it is unique, and look at their own processes, and are those processes adequate.

The NRC must have a new, open, general public involvement process. The process that you have described is unacceptable. This is a unique program, and this is like saying we are going from a generating plant that generates power through coal, and we are going to use the same review process with nuclear materials.

The process that you now have in place is not an adequate process for the general public. As a unique process, the NRC should not be myopic in its viewpoints. It has a safety plan, or it has many safety plans for on-site storage, and generators, and for on-site storage at a proposed repository, and the casks are within the system.

But it does not address the broad spectrum of transportation. It is presently shifting those responsibilities to other Federal agencies.

The NRC needs to address the transportation issue. The NRC will also be reviewing the license that none of the public has an opportunity to review either at the same time or prior to NRC

receiving that.

At this point in time, we have received documents from the Department of Energy that is labeled a final environmental impact statement. To the best of our knowledge, three agencies, including in the Department of Energy, has told us that this is not the real final environmental impact statement.

Therefore, they have lost their credibility to this organization, and to this community. Finally, the NRC must really review the background, the experience, and management ability, and track records of the licensee in this case.

It is like Al Capone applying for a liquor license in Chicago. I think that Chicago at that one time would have turned him down. If Enron employees went and applied for a license from you, I think you would have looked at the management capabilities of the Enron Corporation.

I think what we are asking you here is to look at the past practices of the Department of Energy, its contractors, and include that as part of your review process. Thank you.

MR. CAMERON: And thanks, Harry. And could you tell us your full name, Harry?

MR. KELMAN: I am Harry Kelman,

K-E-L-M-A-N, and I am with Clark County, the Nuclear Waste Division.

MR. CAMERON: And Harry, thank you for those comments, and the last one on management capabilities was brought up originally today, and I think that is something for the NRC to think about as well. Thank you. Yes?

MR. HERESZ: I guess this is the appropriate time for me to give my closing comments. And quite obviously I am utterly opposed to the insanity of using Yucca Mountain as a nuclear garbage dump.

When the DOE was here a few months ago, I sat and waited for eight hours to give five minutes of testimony, and Secretary Abraham promptly just flushed it down the toilet, because the people that had packed the room that night made no impact on his decision at all.

And I am beginning to get the same sense from the NRC. Las Vegas is my home, and Nevada is my home, and I live here. I don't go back to Washington, D.C. after a couple of -- three days, and just start working on another job like you folks do, and take this as just another job.

This is a life or death issue for those of

us here in Nevada. I want you to know that we are going to do everything that we can to put the stops to what you are trying to do to Nevada, and it doesn't appear that you are going to help us, and so our only resort is going to have to be through the courts.

MR. CAMERON: Okay. Thank you for that comment. Are there further questions or comments on security or performance monitoring?

MR. BECHTEL: I really appreciate you holding the hearing in Nevada for one thing, and what I think is definitely needed is more hearings in the future on a very complex issue that as you can tell is very important to Nevadians.

And in my former life, and in my interactions with the NRC, I appreciated the opportunity to sit down with you all and talk about the environmental impact statement. I know that we had a lot of access and a lot of concern, and our comments deeply reflected one of your comments.

But I am hoping that -- you guys are the last line of defense, and having just a lot of the -- having heard a lot of the Congressional hearings, they are down the track.

And I think that it is going to be incumbent upon the NRC to be -- well, there is the old

saying about Caesar's wife, but just making sure that you actually do follow through, and I realize that the Commission is an appointed group, too.

But that this is a very serious issue to all of us, and it requires a lot of vigor in your review.

MR. CAMERON: Okay. Thank you, Dennis. I wanted to just introduce Bob Latta, our on-site representative again, who is right here. But Bob is one of our on-site representatives here, and they fulfill a very key position, and it will become more and more important in the future.

And I think that one of the things that they do is that they are available to people in the community, and they are here on-site to be called and asked questions, and get information from them, and about your concerns.

And I think that Bob has an example of something from one of the citizens that he deals with, and something to read into the record, but Bob, if you want to say anything about the on-site rep position and responsibilities, feel free to do that.

MR. LATTA: Thank you very much. I am one of three full-time NRC employees stationed here in Las Vegas, and I am a resident here and have my family

here.

We serve as the extra point of contact between the NRC and DOE, and the NRC has had a presence associated with the Yucca Mountain project for a number of years, and I believe they will continue with that activity.

I am very grateful to Chip for allowing me the opportunity, and before he left Frank Perna asked me if I would read a comment for him into the record, and I told him that I would do that. And these comments from Frank Perna, a resident of Clark County, Nevada.

He states, "I suggest that the audience request a full hearing record of the joint meeting of the U.S. Senate Energy and Appropriations Committee held on May 3rd of 2001, and that request can be made through the Committee on Energy and Natural Resources, and the address is 364 Dirksen Building, Washington, D.C. 20510."

Also, that the Energy Chairman, Richard Meserve, showed his bias by promoting a lifting of the ban on foreign ownership of nuclear power plants and the promotion of Price-Anderson legislation, and eliminating paperwork related to license renewal of nuclear power plants.

He believes that these things are risky and those comments again were provided by Frank Perna.

MR. CAMERON: Okay. Thank you, Bob. Calvin, do you have another remark for us, please?

MR. MEYERS: (Off microphone) A closing comment. My name is Calvin Myers, and I was born and raised here, and not going anywhere, and I am different from everyone of you guys. You guys say you are residents, but I am not a resident. I am part of the land, which is more important.

Because I can move to Washington, D.C., but my heart will bring me back to the reservation, and that is where I grew up and that is where I will be buried, and I am proud of that, because I am the only one in this room that can say that I was born and raised here, and I am going back, no matter what.

No matter where I die, I am coming back to the reservation because I am still part of that land, even when I am gone, which brings up the fact that when you talk about that transportation has to be part of the licensing application, which has never been talked about, and you guys keep dancing around it, it is the most important parts of my tribe, my people, and for people all over the United States that are indigenous to the land.

They hold the land more valuable than the dollar, and we hold the land as part of us, and the land grows for us, and the land has helped us for many, many years, and it will help us for many, many years in the future.

I see the land, and I am going to talk about some spiritualities , and social things, and even the financial well-being of the tribe. But I see the land take me and my father, and my two aunts to Arizona when we were told not to leave because the weather was too bad, and when we came to Las Vegas, we stopped out at Henderson and got something to eat, and my dad gave food to the land, because that is what we were taught to do, and he prayed to the land and the mountains over here for a safe journey.

And my ex-car was an old Pinto wagon, and it took a quarter of oil to go from here to over to Vegas and another quart to go home. Well, we took that car down to Arizona to identify my brother's body, and we went down there and the roads were dry, and there was nothing wrong, and we came home and the car had used a quart of oil, and that is our spirituality.

And that is what we hold dear to us, which you can't buy, and which you can't pay for. You can't

buy something like that. If with transportation, and anything happens and if and when those things come down the railway or down the interstate, when it comes down by my reservation and it impacts my store, which is the biggest financial money making venture that we have, and it is our only one, and we are trying to be people like anybody else, and we are striving as hard as we can to make those goals, and to take that step into the future, because we can't just look at ourselves today. We have to look at who is coming down the road, and if it is going to be there for them.

So if that is the impact, then it impacts many, many generations. And also when the transportation of the waste comes down the freeway, our children go to the county school off the reservation, and they go as far as 25 miles away from their home to go to school every day.

So if those kids can't go to school, their education is going to be impacted, and their future of being able to live the same way that you guys enjoy, will be impacted greatly, and not just a little bit.

Not that they just can't go to school regularly, but they could be impacted for their entire lives. And I am talking about the spirituality of

when I did, and when I come home to the reservation, we have songs.

And we have a trail that I am supposed to go on, and this transportation is going to affect and be on that trail. Is that trail going to work for me when I die. Will it be impacted, and is that going to work, and is it going to help me to go where I need to go after I am gone.

That is something that you can't buy, and something that the DOE nor the NRC will want to step in, because they don't have it in their heart, and they don't have it in their knowledge. They think it is a hoax.

And that's why I see the DOE and everybody else in the government, and what they think of our traditions. We are not savages. We are some of the kindest people in the world, because we have seen what people can do to other people, and which is being done to us today.

And not just by this project, but by other people and the U.S. Government, and taking funding away from us, and we can't go to the doctor unless we really, really have to go. We can't get glasses and those things are being taken away from us.

These things that you talk about today,

the radioactivity, and the transportation, it is going to take away more than that. It is going to take away the medicines that we use today.

It is going to take away some of the things that we use to make baskets, which is part of our culture, and it is going to take that away from us, and they can't use those things anymore.

And you can't put something in your mouth that is radiated, because we know -- and we are not stupid -- that that will kill you, if not right then, but in the near future.

And not only that, but it will impact your kids, your grandkids, and everybody else in the country, and it impacts those people. We know that. We are not stupid.

We can't use the land the way we want to, and we can't even travel the way that we want to anymore, because those things will impact it too much.

And I am not just talking about how it impacts us today, but our future as a tribe, our future as a government. And I have stated this many times before, that when our government -- we have six people in our government, and one truck could wipe out our government, and I know our Constitution, and it does not have a way of restarting our government.

And the impacts that you talk about today, that is how it impacts my tribe, and I would assume there are other tribes who will be affected down the road. So you need to get out of your box, and I mean completely out, and think what is really happening here.

And what is really happening here is not just the destruction and the contamination of my lands, but of all of the United States, because when you ship a lot of those things, it is going to accumulate, and it is going to destroy people. Thank you.

MR. CAMERON: Okay. Thank you, Calvin. Let me close with -- and before I forget, I wanted to thank Dennis Daniels and Clark County. Dennis helped us with the room and has stayed on beyond closing I think, but thank you.

And I want to thank all of you who attended today for coming today, and for expressing your concerns, and your skepticism, your suggestions with us. This is an extremely serious issue, and you live here, and we recognize that this is really serious.

It is a conclave, and we may have had difficulty -- and to use Calvin's phrase, dancing

around, and questions may have been difficult, and frankly they are difficult questions, and we want to try to give the best answer, and the right answer to you.

And sometimes that is hard to formulate, and some of the questions we don't know, and it is a valuable question to have to ask and to identify that particular question.

But the NRC has been given a job to do by Congress, and we do take it extremely seriously. All the people take their jobs seriously, and we have a mission to protect health and safety, and we are trying our best to do that.

But basically I would just like to thank all of you for being here, and Janet, did you want to say anything in closing?

MS. SCHLUETER: I agree with everything that Chip said. It is a difficult job, and a serious one, and one that we worked very diligently in, and we appreciate you taking your time to come today, and thank you for all your comments.

MR. CAMERON: All right. Thank you very much, and we are adjourned.

(Whereupon, the meeting was concluded at 5:45 p.m.)

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